

JUN 23 1949

NESTS AND EGGS
OF
AUSTRALIAN BIRDS.

EMBRACING PAPERS ON

“OOLOGY OF AUSTRALIAN BIRDS,”

READ BEFORE THE FIELD NATURALISTS' CLUB OF VICTORIA,

SUPPLEMENTED BY OTHER

NOTES & MEMORANDA;

ALSO,

AN APPENDIX OF SEVERAL OUTS — NESTING,
SHOOTING, &c.

BY

ARCHD. J. CAMPBELL.



To

HIS EXCELLENCY

THE MOST HONORABLE

The Marquis of Normanby, G.C.M.G.,

THIS WORK IS DEDICATED,

BY SPECIAL PERMISSION,

IN MEMORY OF HIS TERM OF OFFICE

AS

GOVERNOR OF VICTORIA,

BY HIS MOST OBEDIENT HUMBLE SERVANT,

THE AUTHOR.

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INTRODUCTION.

Oology (derived from the Greek words *oon*, meaning an egg, and *logos*, the science or study) is a branch of Natural Science that is rapidly developing. Now more importance is centred in it by ornithologists than formerly. The late Mr. John Gould, that eminent naturalist, who, with indomitable perseverance, ever possessed a single eye to the advancement of the science he so much loved, says:—"I can assure them (the rising ornithologists of Australia) that the study of the eggs will greatly assist them in assigning the birds to which they belong to their proper genus." One of our greatest living botanists, Baron von Mueller, directs his collectors of botanical specimens always to take the fruit where possible, because, he adds, remembering the instruction of a good old Book, "ye shall know them by their fruits." Likewise, in many instances, the birds may be proved by their fruits.

There are many authors of eggs of British and European birds. One oologist alone has a collection of 1,500 species of eggs. Then there is Mr. Allan Hume, of India, who has spent a lifetime and a fortune in the Nests and Eggs of the birds of his Empire, and benefited the world by publishing his interesting and instructive researches; while in America almost every other scientist is an oologist, and some so methodical that authenticated eggs must be accompanied with the collector's printed and duly signed certificate, particularising locality where taken, number of eggs in set, material of construction, and dimensions, both inside and out, of the nest, and species of bush or tree from which it was taken, &c. There is also a periodical published in Boston (U. S.), entitled *The Ornithologist and Oologist*, furnishing all the information of the day in these specific lines.

This pamphlet is the outcome of papers on "Oology of Australian Birds" that have been appearing from time to time in the *Southern Science Record*, and all the specimens specially noted therein were exhibited and fully described before the Field Naturalists' Club of Victoria. Descriptions

and dimensions are given of about 413, or nearly all the known Australian eggs, 262 being taken from Mr. Gould's celebrated work on the Birds of Australia. I have found that information so concise that in almost every instance I have adopted it *verbatim*. The balance, 151, were unknown to him or his collectors; of these, 122 are described from authenticated specimens in my own collection, 24 from Mr. E. P. Ramsay's papers, and 5 from other authors.

Without wishing to clash in any manner with the excellent "Contributions to Australian Oology" by my talented friend Mr. Ramsay, before the Linnean Society of New South Wales, I beg to state my first paper was published in September 1881, and was in the printer's hands some six months before Mr. Ramsay read his first, which was in January 1882, and in which he did me the great honor of describing some rare eggs from my collection.

The numbers and scientific names refer to those in Gould's "Handbook to Birds of Australia," with which, in nearly every case, the British Museum's "Hand-list to Birds" agrees. Where discrepancies occur, I have denoted the British Museum's name in italics.

The localities mentioned are in accordance with Mr. Ramsay's Tabular List (which I highly commend as a most valuable guide to ornithologists and oologists), with a few alterations and extensions that have come under my own observation. I have also shown where the habitat of any Australian species is known to extend to New Guinea. We are informed by the best authorities that, botanically and zoologically speaking, that country cannot be separated from Australia. New Guinea naturally belongs to Australia as much as Tasmania; both are the land of the Eucalypts and the Kangaroo, a fact not without interest, from a naturalist's point of view, in these days when so much is heard about Federation and Annexation.

The rotation of some of the genera are a little altered to what appeared in the *Southern Science Record*. I have endeavored, perhaps but feebly, to simplify the classification, as far as the families are concerned, from an oologist standpoint. We are sadly in want of a complete classification of the Birds of Australia: that of the British Museum is very conflicting, if not inaccurate.

A very extensive and interesting field lies before future Australian oologists; I mention future, because it will never

all be worked out in our day, for about 300 species of eggs remain totally undetermined and yet to be described; therefore I would urge upon those persons favorably situated to make careful observations in their respective districts, and inform us, not only of the number and character of the eggs of the various birds, but the length of incubation and the share each parent bird takes in the task; also, with regard to birds' architectural instincts, what portion of the nest the male or female contributes to build, or whether both labor from foundation to finish. I should also recommend notes to be made on the spot where practicable—it does not matter how rough. Such data, be it rough or old, will always be invaluable should it fall into the hands of oologists working up notes.

However, be it understood, I strongly denounce the destruction of our indigenous birds, their nests or eggs, except to prove some portion of their economy for scientific knowledge. The wanton and ruthless manner in which many of our useful and beautiful birds are shot or hunted (and I am sorry so very often under the cognisance of the police) is shameful. Take, for instance, that noble bird the Emu: it is only a matter of a very few years before it will be extinct as far as this side of the River Murray is concerned. Then the remarkable Lyre-bird: shortly it will only be found in the fastnesses of the Gippsland mountains except our Legislature intervene. I throw out the hint, in passing, that our Field Naturalists' Club, in conjunction with the Zoological Society, might influence the Government to have the Game Act more stringently carried out, and likewise amend it by adding thereto many of our gay-plumaged birds: such an amendment is absolutely necessary because, in these days of fashion, the fairer sex discard the artificial for the real plumage of many of our feathered friends. There is an amusing parody, which is nevertheless true: it commences something like this:—

“Who killed cock-robin?

Not I, said the sparrow, with my bow and arrow,—

* * * * *

It was that dark-eyed damsel,—I see him in her hat.”

I heard of a court dress in Europe being trimmed with 150 breasts of the Queensland Rifle-bird. It is needless to say that such traffic as that requires a wholesome check.

As the oological portion of this issue may be somewhat technical to my young friends, to engender a love for our

numerous natural objects that can only be perfectly realized in the field, I have added, by way of an appendix, several of my "camp-outings;" however, an apology is due from me on behalf of the language embodied, which is not so depicting or descriptive as required in contemplating such elevating subjects: nevertheless I trust that by common phraseology I may make myself understood, and shall be amply rewarded should I arouse a taste in some of my Australian-born brethren for the study of Nature's wonderful and beautiful subjects. A love for any such study is one of the greatest attributes of the human mind.

In conclusion, I desire to thank all my friends (too numerous to be individually mentioned here) who in the past have afforded me information and lent valuable assistance by donations or exchanges of eggs, and trust, in the future, I may still merit their connections.

Arthur J. Campbell



OOLOGY OF AUSTRALIAN BIRDS.

ORDER I.—ACCIPETRES.—BIRDS OF PREY.

This Order incubates or hatches generally in the months of September, October, and November. In Northern Australia the time depends on the season or rains, and is sometimes as early as May and June.

Family—FALCONIDÆ—Hawks.

Open nests, constructed of dried sticks and twigs and placed in forked boughs of trees, except the Harriers, which breed on the ground, and one of the Falcons and the Kestrel in crevices of cliffs and hollow spouts of trees. Clutch of eggs from two to four.

1. AQUILA (*Uroaëtus*) AUDAX—(Wedge-tailed Eagle). *Locality*—Australia and Tasmania. *Egg*—Clouded with large blotches of pale purple, and small specks and dashes of yellowish umber-brown on a stone-colored ground. Length, 3 inches; breadth $2\frac{5}{16}$ inches. I have had specimens as small as $2\frac{3}{4}$ inches by $2\frac{1}{8}$.

2. HIERÆTUS MORPHNIODES — (Little Eagle). *Locality*—Australia except North, and Victoria. *Egg*—Bluish white, with very faint traces of brown blotchings. Length, 2 inches $2\frac{1}{2}$ lines; breadth, 1 inch $9\frac{1}{2}$ lines.

3. POLIOÆTUS (*Cuncuma*) LEUCOGASTER — (White-bellied Sea-eagle). *Locality*—Australia, Tasmania, and New Guinea. *Egg*—Dull white, faintly stained with reddish brown. Length, 2 inches 9 lines; breadth, 2 inches 3 lines.

4. HALIASTUR LEUCOSTERNUS — (White-breasted Sea-eagle). *Locality*—North Australia, Queensland, New South Wales, and New Guinea. *Egg*—Dirty white, having the surface spread over with numerous hair-like streaks and very minute dots of reddish-brown, the former prevailing and assuming the form of hieroglyphics, these singular markings being most numerous at one end, sometimes at the larger, other times at the smaller. Length, 2 inches 2 lines; breadth, 1 inch 8 lines.

5. HALIASTUR SPHENURUS—(Whistling Eagle). *Locality*—Australia and New Guinea. *Egg*—Bluish white, slightly tinged

Eggs marked with an asterisk (thus *) not described in Gould's work but described from the author's own collection. Those marked with a double asterisk (**) not previously described.

with green, the few brown markings with which they are varied being very obscure, and appearing as if beneath the surface of the shell. Length, 2 inches 3 lines; breadth, 1 inch 9 lines.

6. *PANDION LEUCOCEPHALUS*—(White-headed Osprey). *Locality*—Australia, and Tasmania, and New Guinea. *Egg*—Yellowish white, boldly spotted and blotched with deep reddish brown, which color in some specimens is so dark as to be nearly black; again, other specimens are clouded with large blotches of purple, which appear as if beneath the surface of the shell. Medium length, 2 inches 5 lines; breadth, 1 inch 9 lines.

7. *FALCO (Hierofalco) HYPOLEUCUS*—(Grey Falcon). *Locality*—Queensland, Victoria, Interior and West Australia. *Egg*—Oblong oval, the whole of the ground color obscured by minute dots and freckles of rusty-red: these markings are sometimes in the form of an indistinct band on the larger end. Shell smooth, slightly glossy. Length, 2 inches; breadth, $1\frac{1}{2}$ inches. (Ramsay).

8. *FALCO MELANOGENYS*—(Black-cheeked Falcon). *Locality*—Australia and Tasmania. *Egg*—Ground color buff; but this is scarcely perceptible from the predominance of the blotches of deep reddish chestnut with which it is marbled all over. Length, 2 inches 2 lines; breadth, 1 inch $7\frac{1}{2}$ lines.

This Falcon breeds in the crevices of cliffs without constructing a nest. Instances have been known of their depositing their eggs under cover of a tussock of grass, on a plain, after the manner of Swamp-hawks or Harriers.

10. *FALCO (Hypotriorchis) LUNULATUS*—(White-fronted Falcon). *Locality*—Australia and Tasmania. *Egg*—Light buff, blotched and marbled all over with dark buff. Length, 1 inch $9\frac{1}{2}$ lines; breadth, 1 inch $4\frac{1}{2}$ lines.

11. *IERACIDLA BERIGORA*—(Brown Hawk). *Locality*—Australia and Tasmania. *Egg*—Very beautiful, varying in color, and are seldom found alike; they are also longer, or of a more oval shape than those of the generality of Falcons; the prevailing color is the ground buff white, covered nearly all over with reddish brown. In some specimens an entire wash of this color extends over nearly half the egg, while others are blotched or freckled with it, in small patches, over the surface generally. Medium length, 2 inches $1\frac{1}{2}$ lines; breadth, 1 inch $6\frac{1}{2}$ lines.

12. *IERACIDEA OCCIDENTALIS*—(Western Brown Hawk). *Locality*—South and West Australia, and Victoria. *Egg*—Varies in intensity of color, but differs in little or nothing from that of *I. berigora*.

13. *TINNUNCULUS CENCHROIDES*—(Nankeen Kestrel). *Locality*—Australia. *Egg*—Freckled all over with blotches and minute dots of rich reddish chestnut on a paler ground. Length, $1\frac{1}{2}$ inches; breadth, $1\frac{1}{4}$ inches.

Hitherto the Kestrel was only considered an occasional visitor to Tasmania; but I think now we may fully establish its extension of habitat to that island, since many birds have been observed. I saw two skins in the Hobart Museum—one shot at Sorrell and the other at Clarence Plains. Kestrels also breed in Tasmania. I possessed a set of eggs taken there, and have seen others. In reference to the site for breeding, an old deserted magpie's or crow's nest is generally selected for the purpose, instead of spouts of trees or some cliff crevice as on our Continent.

14. *LEUCOPIZA RAII*—(New Holland Goshawk). *Locality*—Queensland, New South Wales, Victoria, and South Australia. ** *Egg*—Of a bluish or greenish white tinge, with a few large blotches and small, of reddish brown, at intervals over the shell. These markings are easily removed by moisture. Length 2 inches; breadth $1\frac{1}{2}$ inches.

This egg is described from one of a nest of two taken near Geelong in 1880.

17. *ASTUR (Urospiza) APPROXIMANS*—(Australian Goshawk). *Locality*—Australia, except North, and Tasmania. *Egg*—Bluish white, in some instances sparingly smeared over with blotches of brownish buff. Length 1 inch 10 lines; breadth, 1 inch $5\frac{1}{2}$ lines.

19. *ACCIPITER (Urospiza) TORQUATUS (cirrhocephalus)*—(Collared Sparrow-Hawk). *Locality*—Australia and Tasmania. *Egg*—Bluish white, in some instances stained and smeared over with buff; in others square-formed spots, and a few hair-like streaks of deep brown. Medium length 1 inch 6 lines; breadth 1 inch 3 lines.

Being the smallest Hawk's egg, this is not without interest. It has been fully described by Mr. Gould, and on two consecutive occasions by Mr. Ramsay before the Linnean Society of New South Wales.

20. *GYPICITINIA MELANOSTERNON*—(Black-breasted Buzzard). *Locality*—New South Wales, Victoria, South and West Australia. **Egg*—(1) Ground color white, with a few indistinct large brown blotches on centre of egg, covered all over with dark violet hieroglyphics. (2) Ground color white, blotched all round centre and larger end with dark brown inclining to violet, intermingling with a few indistinct lilac blotches as if beneath surface of shell; also towards smaller a few small brownish spots. Length $2\frac{1}{2}$ inches; breadth $1\frac{3}{4}$ to $1\frac{7}{8}$ inches.

These descriptions are from a pair of eggs taken by Mr. H. H. Peck, in the Riverina district, on the 17th September.

21. *MILVUS AFFINIS*—(Allied Kite). *Locality*—Australia. **Egg*—Differs in two ways from those of the general run of *Falconidæ*. First, it is not so round; second, the texture of the shell is finer, although in places a little lumpy on the surface,

which is also somewhat glossy. The ground color is of a warm fleshy white, moderately marked and blotched all over, but particularly at the larger end, with reddish or chestnut brown; a few bluish-grey blotches appear as if under the shell's surface. Length, 2 inches 3 lines; breadth, 1 inch 7 lines.

Mr. Ramsay has described eggs as those of the Allied Kite, but I cannot reconcile his description with mine. His dimensions barely exceed those of his Black-shouldered Kite's, whereas the Allied Kite is a bird nearly twice the size of the Black-shouldered Kite.

22. *MILVUS (Lophoictinia) ISURUS*—(Square-tailed Kite). *Locality*—Australia, except North. *Egg*—Ground color soft buffy white, faintly freckled with rufus, becoming much deeper at the smaller end, others very largely blotched with reddish brown; somewhat round in form. Length, 2 inches; breadth, 1 inch 7 lines.

23. *ELANUS AXILLARIS*—(Black-shouldered Kite). *Locality*—Australia. *Egg*—Ground color, where visible, is of a dull white, but it is mostly obscured by blotches and smears of dark reddish chocolate. Length, 1 inch 8 lines; breadth, 1 inch 3 lines. (Ramsay.)

24. *ELANUS SCRIPTUS*—(Letter-winged Kite). *Locality*—Australia, except North. *Egg*—White ground, blotched and marked with reddish brown, darkest at smaller end; markings easily removed by wetting. Length, $1\frac{3}{4}$ inches; breadth, $1\frac{3}{8}$ inches.

25. *BAZA SUBCRISTATA*—(Crested Hawk). *Locality*—Queensland and New South Wales. *Egg*—Pure white. Length, 1 inch 9 lines; breadth, 1 inch 5 lines.

26. *CIRCUS (Spilocircus) ASSIMILIS (Jardinii)*—(Allied Harrier). *Locality*—Australia, except North, and Tasmania. *Egg*—Pure white. Length, 2 inches; breadth, $1\frac{1}{2}$ inches.

27. *CIRCUS JARDINII (assimilis)*—(Jardine's Harrier). *Locality*—Queensland, New South Wales, Victoria, and South Australia. *Egg*—Same description as *C. assimilis*.

Family—STRIGIDÆ.—Owls.

Breed in holes of large gum-trees. Clutch of eggs, two to four.

34. *HIERACOGLAUX CONNIVENS*—(Winking Owl). *Locality*—Australia. *Egg*—Pure white, somewhat round in form and large for size of the bird. Length, 2 inches; breadth, $1\frac{5}{8}$ inches.

36. *SPILOGLAUX BOOBOOK*—(Boobook Owl). *Locality*—Australia and Tasmania. *Egg*—Perfectly white, unusually round. Length, 1 inch 7 lines; breadth, 1 inch 4 lines.

ORDER II.—PASSERES.—PERCHING BIRDS.

Incubating months from end of July to beginning of January, but principally September, October, and November. In Northern Australia it may be earlier or later according to the rainy season.

Family—CAPRIMULGIDÆ.—Goatsuckers.

Nightjars breed on the bare ground, except genus *Ægotheles*, which resort to hollow branches or spouts of gum-trees. Clutch one or two eggs. *Podargi* construct flat nests of small sticks on horizontal branches of trees. Clutch, two eggs.

38. *ÆGOTHELES NOVÆ-HOLLANDIÆ*—(Owlet Nightjar). *Locality*—Australia, except North, and Tasmania. *Egg*—Perfectly white, roundish in form. Length, about 1 inch 2 lines; breadth, 11 lines.

40. *PODARGUS STRIGOIDES*—(Tawny-shouldered Podargus). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Beautiful immaculate white, and of a long oval form. Length 1 inch 10 lines; breadth, 1 inch 3 lines.

41. *PODARGUS CUVIERI*—(Cuvier's Podargus). *Locality*—Victoria, South Australia, and Tasmania. *Egg*—White, and nearly a true oval in form. Length, 1 inch 9 lines; breadth, 1 inch 3 lines.

49. *EUROSTOPODUS GUTTATUS*—(Spotted Nightjar). *Locality*—Australia. *Egg*—Of a uniform light olive stone-color, with here and there a roundish purple blotch or spot. Length 1 inch $5\frac{1}{2}$ lines; breadth, 1 inch $1\frac{1}{2}$ lines.

50. *CAPRIMULGUS MACRORURUS*—(Long-tailed Nightjar). *Locality*—North Australia and New Guinea. *Egg*—Of a light creamy color, with obscure dull slate-grey spots, and a zone of similar spots round the larger end; other specimens have no zone, but the spots more evenly dispersed over the surface. Length, 1 inch $1\frac{3}{4}$ lines; breadth, $10\frac{1}{4}$ lines. (Ramsay.)

Family—HIRUNDINIDÆ—Swallows.

Nests constructed of mud, lined with feathers, and placed under verandahs, bridges, or on face of cliffs. Some species nest on the bare wood in holes of trees or bank-sides. Clutch, three or four eggs.

53. *HIRUNDO (Hypurolepis) FRONTALIS*—(Welcome Swallow). *Locality*—Australia and Tasmania. *Egg*—Ground color, pinky white, with numerous fine spots of purplish brown, the interspaces with specks of light greyish brown, assuming, in some instances, the form of a zone at the larger end. Length 8 or 9 lines; breadth 6 lines.

55. *HYLOCHELIDON NIFRICANS*—(Tree Swallow). *Locality*—Australia, Tasmania, and New Guinea. *Egg*—Pinky white, sometimes faintly freckled at the larger end with fine spots of light reddish brown. Length, $8\frac{1}{2}$ lines; breadth, 6 lines.

56. *LAGENOPLASTES ARIEL*—(Fairy Martin). *Locality*—Australia, except West. *Egg*—Sometimes white, others spotted and blotched with red. Length, $8\frac{1}{2}$ lines; breadth, $5\frac{3}{4}$ lines.

57. *CHERAMŒCA LEUCOSTERNA*—(White-breasted Swallow). *Locality*—Australia, except North. *Egg*—White, somewhat lengthened and pointed in form.

Family—*MEROPIDÆ*.—Bee-Eaters.

Clutch, four eggs, deposited in holes drilled in river-banks or sand-hills.

58. *MEROPS ORNATUS*—(Australian Bee-eater). *Locality*—Australia and New Guinea. *Egg*—Round, pinky white. Length, $10\frac{1}{4}$ lines; breadth, $9\frac{1}{4}$ lines.

Family—*CORACIDÆ*.—Rollers.

Clutch, four eggs, placed in holes of trees.

59. *EURYSTOMUS PACIFICUS*—(Australian Roller). *Locality*—Australia, except South and West, and New Guinea. *Egg*—Pearly white, considerably pointed at the smaller end. Length, 1 inch 5 lines; breadth, 1 inch 2 lines.

Family—*ALCEDINIDÆ*.—Kingfishers.

Clutch of four sometimes five eggs, deposited in hollow trees or holes drilled in banks.

60. *DACELO GIGAS*—(Great Brown Kingfisher). *Locality*—Australia, except North and West. *Egg*—Pearly white. Length, 1 inch $9\frac{1}{2}$ lines; breadth, 1 inch 5 lines.

61. *DACELO LEACHII*—(Leach's Kingfisher). *Locality*—Queensland and New Guinea. **Egg*—Smooth, glossy, and pearly white. Length, 1 inch $10\frac{1}{2}$ lines; breadth, 1 inch $5\frac{1}{2}$ lines.

63. *TODIRHAMPHUS (Sauropatis) SANCTUS*—(Sacred Kingfisher). *Locality*—Australia and New Guinea. *Egg*—Pinky white. Length, $1\frac{1}{2}$ lines; breadth, $9\frac{1}{2}$ lines.

64. *TODIRHAMPHUS (Sauropatis) PYRRHOPYGIUS*—(Red-backed Kingfisher). *Locality*—Australia. *Egg*—Pinky-white. Length, 1 inch; breadth, $10\frac{1}{4}$ lines.

66. *CYANALCYON MACLEAYI*—(MacLeay's Kingfisher). *Locality*—Queensland, New South Wales, and New Guinea. *Egg*—Pearly white, and nearly round in form. Length, 1 inch; breadth, $10\frac{1}{4}$ lines.

69. *ALCYONE AZUREA* (Azure Kingfisher). *Locality*—Australia, except North and West. *Egg*—Pearly white, rather round in form. Length, $10\frac{1}{4}$ lines; breadth, 9 lines.

Family—ARTAMIDÆ.—Wood Swallows.

Nests constructed of fine twigs and grass, lined with fibrous roots, and placed in any convenient bush, fork of tree, or spout of bark. Clutch, two or three eggs.

73. *ARTAMUS SORDIDUS*—(Wood Swallow). *Locality*—Australia, except North, and Tasmania. *Egg*—Differs much in the disposition of markings; ground color is dull white, spotted and dashed with umber brown: in some a second series of greyish spots appear as if beneath the surface of the shell. Length, 11 lines; breadth, 8 lines.

74. *ARTAMUS MINOR*—(Little Wood Swallow). *Locality*—Queensland and New South Wales. **Egg*—Of a light yellowish white tinge, marked and spotted with umber-brown and purplish grey, the latter color appearing as if under the surface of the shell: the majority of the markings are in the form of a belt about the upper quarter of the egg. Length, $8\frac{1}{2}$ lines; breadth, $6\frac{1}{2}$ lines.

75. *ARTAMUS CINEREUS*.—(Grey-breasted Wood Swallow). *Locality*—North and West Australia. *Egg*—Subject to considerable variation in color and in character of markings; usually bluish white, spotted and blotched with lively reddish brown, intermingled with obscure spots and dashes of purplish grey, all the markings being most numerous towards the larger end. Length, 11 lines; breadth, 8 lines.

78. *ARTAMUS PERSONATUS*—(Masked Wood Swallow). *Locality*—Australia, except North. *Egg*—Differs remarkably; ground color being light greenish grey, dashed and speckled with hair-brown, principally at the larger end, and slightly spotted with grey, appearing as if beneath the surface of the shell. Length, $10\frac{1}{2}$ lines, breadth, $8\frac{1}{2}$ lines.

79. *ARTAMUS SUPERCILIOSUS*—(White eye-browed Wood Swallow). *Locality*—Australia, except North and West. *Egg*—Ground color dull buffy-white, spotted with umber brown, forming a zone near the larger end; in some, these spots are sparingly sprinkled over the whole surface; others have the obscure grey spotting like those of *A. sordidus*. Length, 11 lines; breadth, $8\frac{1}{2}$ lines.

80. *ARTAMUS LEUCOPYGIALIS*—(White-rumped Wood Swallow). *Locality*—Australia, except West, and New Guinea. *Egg*—Much lighter in color and more minutely spotted than those of any other species of the genus; ground color fleshy white, finely freckled and spotted with faint markings of redish and grey, in brown some instances forming a zone at the larger end. Length, 10 lines; breadth, $7\frac{1}{2}$ lines.

Family—AMPELIDÆ.—Diamond-Birds.

Dome-shaped nests of grass and fine chips of bark placed in excavations at the termination of holes drilled in the ground. In some species they are placed in hollow limbs of trees. Clutch, four eggs.

81. *PARDALOTUS PUNCTATUS*—(Spotted Diamond-Bird). *Locality*—Australia, except North, and Tasmania. *Egg*—Rather round in form, of a beautiful polished fleshy white. Length, $7\frac{1}{2}$ lines; breadth, $6\frac{1}{2}$ lines.

82. *PARDALOTUS RUBRICATUS*—(Red-lore'd Diamond-Bird). *Locality*—Queensland and New South Wales. *Egg*—Pearly white, rather pyriform, and more pointed than those of any other species. Length, $9\frac{1}{2}$ lines; breadth, 7 lines. (Ramsay.)

83. *PARDALOTUS QUADRAGINTUS*—(Forty-spotted Diamond-Bird). *Locality*—Tasmania. *Egg*—White, round in form. Length, $7\frac{1}{2}$ lines; breadth, 6 lines.

84. *PARDALOTUS STRIATUS*—(Striated Diamond-Bird). *Locality*—Australia, except North. *Egg*—Fleshy-white. Length, 9 lines; breadth, 7 lines.

85. *PARDALOTUS AFFINIS*—(Allied Diamond-Bird). *Locality*—New South Wales, Victoria, South Australia, and Tasmania. *Egg*—Beautiful white. Length, 9 lines; breadth, 7 lines.

86. *PARDALOTUS MELANOCEPHALUS*—(Black-headed Diamond-Bird). *Locality*—Queensland and New South Wales. *Egg*—Pearly white. Length, $8\frac{1}{4}$ lines; breadth, $6\frac{1}{4}$ lines.

87. *PARDALOTUS UROPYGIALIS*—(Yellow-rumped Diamond-Bird). *Locality*—North Australia. *Egg*—Same as *P. rubricatus*. Length, $8\frac{1}{2}$ lines; breadth, $6\frac{1}{2}$ lines. (Ramsay.)

Family—LANIIDÆ.—Crow-Shrikes.

Open nests constructed of sticks and other coarse material, lined with grass or bark and placed in forked branches of trees. Clutch, three or four eggs.

88. *STREPERA GRACULINA*—(Pied Crow-Shrike). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Rather oval in form; ground color light chocolate, which is blended or clouded all over with mottle of a darker color. Length, 1 inch 6 or 7 lines; breadth, 1 inch 1 line.

89. *STREPERA FULIGINOSA*—(Sooty Crow-Shrike). *Locality*—Victoria, South Australia, and Tasmania. *Egg*—Pale vinous brown, marked all over with large irregular blotches of brown. Length, 1 inch $7\frac{1}{2}$ lines; breadth, 1 inch 3 lines.

90. *STREPERA ARGUTA*—(Hill Crow-Shrike). *Locality*—Victoria, South Australia, and Tasmania. *Egg*—Somewhat long in form, ground color rich light brown, with a tinge of pink and

a zone of reddish buff markings round the larger end. But in a typical specimen the markings are generally disposed over the whole surface, and are rich and, comparatively speaking, pronounced. In a cabinet this egg readily catches the eye, being the most beautiful, and richest in color and markings, of all the species of the genus *Strepera*. Length, 1 inch 9 lines; breadth, 1 inch 2 lines.

91. *STREPERA ANAPHONENSIS*—(Grey Crow-Shrike). *Locality*—Australia, except North. *Egg*—The ground color of which is either reddish buff or wood-brown, marked over nearly the whole of the surface with blotches of a darker tint. Length, 1 inch, 9 lines; breadth, 1 inch 2 lines.

92. *GYMNORHINA TIBICEN*—(Piping Crow-Shrike). *Locality*—Australia, except North. ** *Egg*—Ground color, bluish-grey, smudged or clouded all over with drab or brown; others are spotted with umber, both on the shell and appearing as if beneath the surface. Length 1 inch, 6 or 7 lines; breadth, 1 inch 1 line.

93. *GYMNORHINA LEUCONOTA*—(White-backed Crow-Shrike). *Locality*—Queensland, New South Wales, Victoria, and South Australia. *Egg*—Very long in form, and of a dull bluish-white, in some instances tinged with red, marked with large zig-zag streakings of brownish red. Occasionally, eggs are met with which are spotted with black or umber-brown. Average length, 1 inch 8 lines; breadth, 1 inch 1 line. There is a remarkable pair of eggs of this species in my collection, of the usual size and shape, but of a beautiful bluish or greenish color, without any marking except a few indistinct freckles of chestnut about the top. They were taken on Phillip Island, Western Port.

94. *GYMNORHINA ORGANICUM (hypoleuca)*—(Tasmanian Crow-Shrike). *Locality*—Tasmania. *Egg*—Lengthened form, with a ground color of greenish ashy grey, spotted and blotched, particularly at the larger end, with umber-brown and bluish grey, the latter color appearing as if beneath the surface of the shell. Length, 1 inch 5 lines; breadth, 1 inch.

95. *CRATICUS NIGROGULARIS (robustus)*—(Black-throated Crow-Shrike). *Locality*—Queensland, New South Wales, Victoria, and South Australia. *Egg*—Dark yellowish-brown, spotted and clouded with markings of a darker hue, and in some instances with a few minute spots of black. Length, 1 inch 3 lines; breadth, 11 lines.

99. *CRATICUS (Bulestes) TORQUATUS*—(Collared Crow-Shrike). *Locality*—Queensland, New South Wales, Victoria, and South Australia. *Egg*—Considerable difference is found to exist in the color, the ground color of some being dark yellowish brown, with obscure blotches and marks of a darker hue, and here and there a few black marks not unlike small blots of

ink; while in others the ground color is much lighter, and the darker markings are more inclined to red, and to form a zone round the larger end. Length, 1 inch 3 lines; breadth, 11 lines.

100. *CRACTICUS (Bulestes) CINEREUS* — (Cinereous Crow-Shrike). *Locality* — Tasmania. ** *Egg* — Ground color light greenish tinge, spotted over with chestnut or brown, particularly round the larger end, the spots appearing lighter beneath the surface of the shell; there are also a few ink-like dots on the surface. Length, 1 inch 3 lines; breadth, 12 lines.

Family ————— (?).

Nest bowl-shaped, about six inches in breadth, formed of mud inlaid with grass and feathers, and placed on a bare horizontal branch generally overhanging a river or swamp. Clutch, four eggs.

102. *GRALLINA PICATA* — (Pied Grallina). *Locality* — Australia. *Egg* — They differ considerably in color and in shape, some being extremely lengthened, while others bear a relative proportion; the ground color of some is a beautiful pearl white, of others pale buff; their markings also differ considerably in form and disposition, being in some instances wholly confined to the larger end, in others distributed over the whole surface, but always inclined to form a zone at the larger end; in some, the markings are of a deep chestnut-red, in others light red, intermingled with large clouded spots of grey appearing as if beneath the surface of the shell. Medium length, 1 inch 2 lines; breadth, 10 lines.

The British Museum places this bird under the family *Motacillidæ*, but it is obvious that it should not be included with these birds, seeing its habits and manner of nidification are entirely different.

Family — CAMPEPHAGINÆ.

Graucali, &c. — Flat slight nests of fine short dead twigs curiously joined together with cobwebs and placed in forks of horizontal branches. Clutch, two or three eggs. *Pachycephalæ*. — Nests cup-shaped, of fine twigs, lined with fibrous roots and placed in bushes or scrub. Clutch, two or three eggs. *Colluricinclæ*, &c. — Nests cup-shaped, deep, composed of bark and leaves, lined with fibrous roots and placed at foot of stump, or in hollow parts of trees near the ground. Clutch, four eggs.

103. *GRAUCALUS MELANOPS* — (Black-faced Graucalus). *Locality* — Australia and New Guinea. *Egg* — Ground color varies from wood-brown to asparagus-green, the blotches and spots, which are generally disposed over the surface, varying from dull chestnut-brown to light yellowish brown; in some instances

they are also sparingly dotted with deep umber brown. Length, 1 inch $2\frac{1}{2}$ lines; breadth, $10\frac{1}{2}$ lines.

104. *GRAUCALUS PARVIROSTRIS* — (Tasmanian Graucalus). *Locality*—Tasmania. ** *Egg*—Very similar to the *G. melanops*, ground color beautiful dark green, and spotted or blotched, particularly at the larger end, with umber of different shades. Length, 1 inch $2\frac{1}{2}$ lines; breadth, $10\frac{1}{2}$ lines.

105. *GRAUCALUS MENTALIS* (Varied Graucalus). *Locality*—Queensland, New South Wales, and Victoria. ** *Egg*—Ground color of a light olive green marked all over with roundish spots and blotches of reddish brown, dark olive, and purplish grey: the latter appears under the shell's surface. Length, 1 inch, 3 lines; breadth, $10\frac{1}{2}$ lines.

106. *GRAUCALUS HYPOLEUCUS* — (White-bellied Graucalus). *Locality*—Queensland. * *Egg*—Somewhat smaller than those of the other species; ground color of a beautiful warmish green, spotted and marked, but more so about the apex, with reddish and chestnut brown, also with some dark purplish markings appearing as if under the surface of the shell. Length, 13 lines; breadth, $9\frac{1}{2}$ lines.

108. *PTEROPODOCYS PHASIANELLA* — (Ground Graucalus). *Locality*—Australia, except North. ** *Egg*—Long and tapering in form, of a polished dark warm green or olive, without any blotches, but the slightest washings over the shell of a darker shade of the same tint, especially on the top of the egg; others are lightly marbled or clouded all over with a chestnut tint. Length, 1 inch 3 lines; breadth, $10\frac{1}{4}$ lines.

111. *CAMPEPHAGA (Lalage) LEUCOMELA* — (Black and White Campephaga). *Locality*—Queensland and New South Wales. ** *Egg*—Ground color light greyish-green, mottled all over with chestnut, and in some instances with umber, the color being so well diffused as to almost hide the ground color. Length, 10 lines; breadth, 7 lines.

112. *CAMPEPHAGA (Lalage) HUMERALIS* — (White-shouldered Campephaga). *Locality*—Australia and New Guinea. *Egg*—Differs considerably in color, some being of a light green, blotched all over with wood brown, while others have a lighter ground so largely blotched with chestnut brown as nearly to cover the entire surface of the shell: some specimens are almost of a uniform greyish green. Length, $9\frac{1}{2}$ lines; breadth, $7\frac{1}{2}$ lines.

113. *PACHYCEPHALA GUTTURALIS* — (White-throated Thick-head). *Locality*—Queensland, New South Wales, Victoria, and South Australia. ** *Egg*—Ground color yellowish white, speckled more about the larger end with small spots of dark brown or umber, larger blotches of a lighter shade of the same color appearing beneath the surface of the shell: some specimens have more of a pinkish blush in the ground color, with bolder markings of reddish brown. Length, 11 lines; breadth, 8 lines.

I described these from my own specimens; because Mr. Ramsay is of opinion that Mr. Gould's *P. gutturalis* was described from specimens of the West Australian bird, which he (Mr. Ramsay) has proved to be another species, viz., *P. occidentalis*.

— *PACHYCEPHALA OCCIDENTALIS*—(Western Thickhead). *Locality*—West Australia. *Egg*—Ground color of brownish buff, sparingly streaked and spotted with reddish brown and bluish grey, the latter color appearing as if beneath the surface of the shell. Length, $10\frac{1}{2}$ lines; breadth, 8 lines.

114. *PACHYCEPHALA GLAUCURA*—(Grey-tailed Thickhead). *Locality*—Tasmania and Bass's Straits Islands; also specimens are shown in the Melbourne Museum as having been taken in Victoria. (?) ** *Egg*—In shape, peculiar and inclined to oval, diminishing in a pretty curve from the shoulder to the apex, which is sharper than the bottom end of the egg; ground color yellowish white, which is darker round the shoulder, where is freckled a zone of small spots of dark brown, and others dimmed as if being under the shell. Length, 11 lines; breadth, $8\frac{1}{4}$ lines.

These dimensions are the average of three clutches (3, 2, and 2 eggs) taken by me in Tasmania.

115. *PACHYCEPHALA MELANURA*—(Black-tailed Thickhead). *Locality*—Queensland. * *Egg*—Ground color whiter and markings more pronounced than the known eggs of the same genus; the markings are of a dark olive or umber, and are mostly about the apex, and have the appearance of spots and smudges struck on obliquely or in a downward direction; a few grey markings appear under the shell's surface. Length, 10 lines; breadth, $7\frac{1}{4}$ lines.

116. *PACHYCEPHALA RUFIVENTRIS*—(Rufous-breasted Thickhead). *Locality*—Australia, except West. *Egg*—Of an olive tint, with a zone of indistinct spots and blotches at the larger end. Length, 11 lines; breadth, 8 lines.

I once saw a very remarkable set of eggs of this species. Instead of the usual color they were of a rich salmon color, and could have been easily mistaken for those of some species of Honey-eater.

120. *PACHYCEPHALA GILBERTI*—(Gilbert's Thickhead). *Locality*—Victoria, South and West Australia. ** *Egg*—Characteristic of the well-known egg of *P. rufiventris*, but lighter in color, being of a sickly olive tint, with a belt of spotted markings, about the upper quarter, of olive and dullish grey, the latter color as usual appearing under the shell's surface. Length, $10\frac{1}{4}$ lines; breadth, $7\frac{1}{2}$ lines.

This interesting Thickhead essentially belongs to the West Australian avifauna, although specimens have been procured in South Australia. It was in October, 1882, I had the extreme

pleasure of further extending its locality to the Western province of Victoria, having shot a pair in the Wimmera District. But the egg above described was taken in Western Australia.

122. *PACHYCEPHALA (Timixos) OLIVACEA* — (Olivaceous Thickhead). *Locality* — New South Wales, Victoria, South Australia, and Tasmania. ** *Egg* — Extremely beautiful; form being characteristic of that of the *P. glaucura*, having the peculiar but graceful diminishing curve from the shoulder to the apex, which is as sharp as the bottom end of the egg; ground color generally whitish, sometimes with a tinge of yellow, with a few spots or blotches of umber of different shades scattered over the shell, and inclined to form a belt round the shoulder, where a few appear as if beneath the shell. Length, 1 inch 1 line; breadth, $9\frac{1}{2}$ lines.

This description is from Tasmanian specimens: they appear very rare on our continent; I only know of one nest having been taken, and that in South Gippsland.

123. *COLLURICINCLA HARMONICA* — (Harmonious Shrike-Thrush). *Locality* — Australia, except North and West. *Egg* — Beautiful pearly white, thinly sprinkled with large blotches of light chestnut-brown and dull bluish grey, the latter color appearing as if beneath the surface of the shell. Length, 1 inch 2 lines; breadth, 10 lines.

124. *COLLURICINCLA RUFIVENTRIS* — (Buff-bellied Shrike-Thrush). *Locality* — West Australia. *Egg* — Beautiful bluish or pearly white, with large blotches of reddish olive-brown and dark grey, the latter appearing as if beneath the surface of the shell. Length, 1 inch 1 line; breadth, 10 lines.

125. *COLLURICINCLA BRUNNEA* — (Brown's Shrike-Thrush). *Locality* — North Australia and New Guinea. *Egg* — Pearly bluish white, spotted and blotched with markings of olive-brown and grey, the latter appearing as if beneath the surface of the shell. Length, 1 inch 2 lines; breadth, 10 lines.

126. *COLLURICINCLA SELBII* — (Selby's Strike-Thrush). *Locality* — Tasmania and Flinders Island. ** *Egg* — Very similar to that of the *C. harmonica*, smooth shell and pearly white, sparingly marked with umber and dark olive blotches, and dull grey markings appearing beneath the shell's surface. Length, 1 inch 2 lines; breadth, 10 lines.

This Thrush not unfrequently constructs its nest in an old deserted nest of some other species of bird, or in that of the Ring-tailed Opossum.

127. *COLLURICINCLA PARVULA* — (Little Strike-Thrush). *Locality* — North Australia. *Egg* — Beautiful pearly flesh-white regularly spotted all over with dull reddish orange and umber-brown; like the eggs of the other species of the genus, they are also sprinkled over with bluish markings, which appear as if

beneath the surface of the shell. Length, 1 inch ; breadth, 9 lines.

128. *COLLURICINCLA RUFIGASTER*—(Rusty-breasted Shrike-Thrush). *Locality*—Queensland, New South Wales, and New Guinea. *Egg*—White, thickly sprinkled over the surface with dull slate-colored and grey freckles, closer towards the thick end, where they form a zone or crowded patch on the tip. (Ramsay.)

129. *FALCUNCULUS FRONTATUS*—(Frontal Shrike-Tit). *Locality*—Australia, except North and West. ***Egg*—Pearly white and shiny, freckled over, especially at the larger end, with dark olive or umber spots, as many spots of a greyish color appearing beneath the shell's surface. Length, $10\frac{1}{2}$ lines ; breadth, $7\frac{1}{2}$ lines.

130. *FALCUNCULUS LEUCOGASTER*—(White-bellied Shrike-Tit). *Locality*—West Australia. *Egg*—Glossy white, with numerous minute speckles of dark olive most thickly disposed at the larger end. Length, $10\frac{1}{2}$ lines ; breadth, $7\frac{1}{2}$ lines.

131. *OREOICA CRISTATA*—(Crested Oreoica). *Locality*—Australia, except North. *Egg*—Vary much in color, the ground-tint being bluish white, in some instances marked all over with minute spots of ink-black, in others with long zig-zag lines of the same hue. In some these markings are confined to the larger end, where they form a zone ; in others they are equally spread all over the surface, intermingled with black markings, also blotches of grey, appearing as if beneath the surface of the shell ; and some eggs have been found with the ground color of the larger end of a beautiful bluish green. Length, 1 inch $1\frac{1}{2}$ lines ; breadth, $9\frac{1}{2}$ lines.

Family—MUSCICAPIDÆ.—Flycatchers.

Elegant, compact, cup-shaped nests, composed of dried grasses, bark, and roots matted together, covered with cobwebs and generally placed on horizontal dead branches. Clutch, three eggs.

134. *RHIPIDURA ALBISCAPA*—(White-shafted Fantail). *Locality*—Australia, except North, and Tasmania. *Egg*—Ground color white, blotched all over, but particularly at the larger end, with brown slightly tinged with olive. Length, 7 lines ; breadth, $5\frac{1}{4}$ lines.

136. *RHIPIDURA RUFIFRONS*—(Rufous-fronted Fantail). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—ground color stony white, speckled all over with purple and yellowish brown spots and markings disposed so numerously as to form a zone at the larger end. Length, 8 lines ; breadth, 6 lines.

139. *SAULOPROCTA MOTACILLOIDES*—(Black Fantail). *Locality*—Australia. *Egg*—Dull greenish white, banded round the centre or towards the larger end with blotches and spots of

blackish and chestnut brown, which in some instances are very minute. Length, $9\frac{1}{2}$ lines; breadth, 7 lines.

141. *SEISURA INQUIETA*.—(Restless Flycatcher). *Locality*—Australia, except North. *Egg*—Dull white, distinctly zoned round the centre with spots of chestnut and greyish brown, the latter color appearing as if beneath the surface of the shell. Length, $9\frac{1}{2}$ lines; breadth, 7 lines.

142. *PIEZORHYNCHUS NITIDUS*.—(Shining Flycatcher). *Locality*—Queensland and New Guinea. *Egg*—Bluish white, blotched and spotted all over with olive and greyish brown, the spots of the latter hue being less numerous and more obscure—the spots inclining towards the form of a zone at the larger end. Length, 10 lines; breadth, 7 lines.

145. *MYIAGRA CONCINNA*.—(Pretty Flycatcher). *Locality*—Queensland. **Egg*—Chubby-like, with a very rounded apex, and of a whitish ground color encircled about the centre with a belt of umber and grey spots and small blotches; the latter color appears as if beneath the surface of the shell. Length, $7\frac{3}{4}$ lines; breadth, 6 lines.

146. *MYIAGRA NITIDA* (*rubecula*).—(Shining Flycatcher). *Locality*—Queensland, New South Wales, Victoria, and Tasmania. *Egg*—Somewhat round in form, and of a greenish white, spotted and blotched all over with umber-brown, yellowish brown, and obscure markings of purplish grey. Length, 9 lines; breadth, 7 lines.

149. *MICRÆCA FASCINANS*.—(Brown Flycatcher). *Locality*—Australia, except West. *Egg*—Pale greenish blue, strongly marked with dashes of chestnut-brown and indistinct blotches of grey. Length, 9 lines; breadth, $6\frac{1}{2}$ lines.

— *MONARCHA ALBIVENTRIS*.—(White-bellied Flycatcher). *Locality*—Queensland. *Egg*—Creamy white, covered with minute rufous dots thinly dispersed over the middle and smaller end, and so thickly at the larger end as to coalesce and form a rufous cap. Length, $7\frac{1}{2}$ lines; breadth, 6 lines.

Family—*SAXICOLIDÆ*.—Robins.

Nests round, cup-shaped, and constructed of strips of soft bark and fibrous matter, trimmed with lichens, &c., lined with hair or fur, and generally situated in crevices or forks of trees. Clutch, three eggs.

163. *ERYTHRODRYAS RHODINOGASTER*.—(Pink-breasted Wood Robin). *Locality*—Victoria, South Australia, and Tasmania. *Egg*—Greenish white, thickly sprinkled with light chestnut and purplish brown. Length, $8\frac{1}{2}$ lines; breadth, $6\frac{1}{2}$ lines.

165. *PETROICA MULTICOLOR*.—(Scarlet-breasted Robin). *Locality*—Australia, except North and Tasmania. *Egg*—Greenish white, slightly tinged with bluish or flesh color, rather minutely

freckled with olive-brown and purplish grey, the latter more obscure than the former. The freckles are very generally dispersed over the surface of the shell, but in some instances they also form a zone near the larger end. Length, $8\frac{3}{4}$ lines; breadth, 7 lines.

166. PETROICA GOODENOVII.—(Red-capped Robin). *Locality*—Queensland, New South Wales, Victoria, and South and West Australia. *Egg*—Bluish white, with numerous fine speckles, particularly at the larger end, of yellowish brown and purplish grey, the latter appearing as if beneath the shell. Length, $7\frac{1}{2}$ lines; breadth, 6 lines.

167. PETROICA PHENICIA.—(Flame-breasted Robin). *Locality*—Queensland, New South Wales, Victoria, South Australia, and Tasmania. *Egg*—General color is greenish white, spotted and freckled with purplish and chestnut brown. Much variety occurs in these markings, some assuming the form of large, bold, irregular spots and blotches, while in others they are merely minute freckles. Length, 9 lines; breadth, 7 lines.

168. MELANODRYAS CUCULLATA.—(Hooded Robin). *Locality*—Australia, except North. *Egg*—Rather lengthened in form, is light olive-green without any spots or markings, but occasionally washed with brown, particularly at the larger end. Length, 10 lines; breadth, $7\frac{1}{2}$ lines.

170. AMAURODRYAS VITTATA.—(Dusky Robin). *Locality*—Tasmania and King's Island. *Egg*—Differs in color from those of every other member of the genus, but more nearly assimilates in tint to those of *Melanodryas cucullata* than of any other. It is of a light greenish blue; some are freckled and spotted with indistinct markings of brown. Length, $10\frac{1}{2}$ lines; breadth, 8 lines.

173. DRYODES BRUNNEOPYGIA.—(Scrub Robin). *Locality*—Victoria and South Australia. ** *Egg*—Shell a little glossy; ground color, greenish or greyish white, completely spotted with fine spots of umber and dark grey; the spots have a tendency to enlarge and thicken round the upper quarter of the egg. Length, $10\frac{3}{4}$ lines; breadth, $8\frac{1}{4}$ lines.

174. DRYODES SPURCILIARIS.—(Eastern Scrub-Robin). *Locality*—North Australia. *Egg*—Regular oval shape, and of a very light stone-grey, thickly covered with small umber blotches, increasing in size and more thickly placed at the larger end. Length, 1 inch; breadth, $8\frac{1}{2}$ lines.

175. EOPSALTRIA AUSTRALIS.—(Yellow-breasted Robin). *Locality*—New South Wales and Victoria. *Egg*—Bright apple-green, speckled and spotted all over with chestnut brown and blackish brown, the latter tint being much less conspicuous than the former. Length, $9\frac{1}{2}$ lines; breadth, $7\frac{1}{2}$ lines.

176. EOPSALTRIA GRISEOGULARIS.—(Grey-breasted Robin). *Locality*—South and West Australia. *Egg*—More lengthened

in form than those of *E. Australis*, and of a wood-brown, obscurely freckled with yellowish red. Length, 10 lines; breadth, $7\frac{1}{2}$ lines.

Family—MENURIDÆ.—Lyre-Birds.

Nests dome-shaped, covered in, side entrance, constructed of strong sticks, roots, ferns, &c., lined inside with feathers, and placed on the ground or in scrub. Egg, one a season.

179. *MENURA SUPERBA*—(Lyre-Bird). *Locality*—New South Wales. *Egg*—Not described in Gould's work, but I noticed one in the Macleayan Museum, Sydney, which appeared exactly similar in shape, size, and coloring to that of the *M. Victorix*.

180. *MENURA VICTORIÆ*—(Queen Victoria's Lyre-Bird). *Locality*—Victoria. *Egg*—Ground color dark purplish grey, with numerous spots of umber or chocolate, about as many spots of dark violet or a darker hue of the ground color appearing beneath the surface of the shell, both classes of markings being more thickly blended about the top of the egg, where they are inclined to form a belt; other specimens, instead of being spotted, are blotched or smudged. Character of the shell—Surface somewhat rough, depressed all over with pin-point-like indents, and with, sometimes, little ridges like the fibrous ribs of a leaf. An egg taken at Warragul measured—length, $2\frac{1}{2}$ inches; breadth, $1\frac{5}{8}$ inches. Another from Wood's Point district—length, $2\frac{3}{8}$ inches; breadth, $1\frac{5}{8}$ inches.

The toil attending the search for Lyre-Birds' nests, of all nesting outs, is the most arduous, and must be experienced to be fully realised; because, firstly, these curious birds incubate in August, one of our wettest months of the year, consequently terribly boggy and greasy tracks have to be travelled; secondly, the nature of country to be scoured is of the roughest and wildest that Gippsland can produce. You have to thread your way through thickly-studded hazel-tree scrub, with wet cat-head ferns up to your knees, then to tear through rank, rasping sword grass which cuts your very clothes, not unfrequently nastily gashing your unprotected hands and face, next entangled in a labyrinth of wire grass holding you at every step, and hiding treacherous slippery logs, on one of which, perhaps, your right foot slips, causing you to perform a "species" of "double shuffle" with your left in order to preserve your equilibrium, which, however, is as often destroyed as not, and, as a natural consequence and *finale* to the "break-down," you land on your side with a grunt, and wallow amongst rank vegetation. To climb the opposite hill you cross on "all-fours" a wet saturated log which naturally bridges the gully: in accomplishing this awkward task overhanging tree-fern fronds dash in your face, drenching you nearly as much as if some individual had thrown a pail of water over you. Notwithstanding the chilly weather, there is always a humidity in these dense forests, and with such

wholesome exercise you are soon bathed in perspiration, and gladly halt now and again for breathing-time at the head of some lovely gully where the scrub is not so dense and you stand in one of Nature's silent picturesque temples. How enthralling! Overhead an arched roof of long handsome tree-fern fronds—at your feet a perfect carpet of finer varieties of fern in place of cat-head and wire grass, and elegant pillars of tree-fern trunks hung with numerous parasitic ferns, and mosses tinted with early Spring's most beautiful verdant hues confront you instead of straight variegated stems of hazel. Here the awful stillness of an Australian forest is hardly broken save by the somewhat soothing sound of a continual hissing and surging of the sea of *Eucalypti* foliage some 200 feet towards the zenith, the chirp of the Yellow Robin, or a beautiful liquid *cadenza* from a Lyre Bird down the gully.

All the natural grandeur of such a romantic sylvan nook as this force upon the memory the concluding verses of Haeser's beautiful and truthful part-song "To the Forest," which is not often sung by our Metropolitan Liedertafel:—

"I seek thy shadows slowly straying,
And dream of love's great happiness;
'Tis where thy verdant boughs are swaying,
That love can all to love express.
"And in thy temple will I, bending,
The wondrous works of God adore,
Thine is the pow'r, O Lord, extending
O'er all the world for evermore."

The nest of Queen Victoria's Lyre-Bird is generally placed on the ground at the base of a stump, or blackwood or similar tree, but sometimes it is situated a little distance from the ground in a fern-tree head, elbow of a musk-tree, or some hollowed tree-trunk. It is dome-shaped, or covered in, with a side entrance, constructed of fine strong rootlets, leaves, and ferns, and lined with feathers of the bird. This, the nest proper, is about a foot high, but considerably higher if the outer covering and foundation of coarse sticks are taken into consideration.

I was never rewarded by finding a new nest, but have found old and deserted ones. I know of nests and eggs seen in July, and in one instance as early as the latter end of June.

There is a curious fact, not hitherto mentioned, in connection with the nidification of this bird, that if its nest be discovered when building, it will desert or destroy the partly-formed structure, and commence operations elsewhere; or if the egg be laid, and be handled and replaced in the nest, the bird will immediately forsake it.

181. MENURA ALBERTI—(Prince Albert's Lyre-Bird). *Locality*—Queensland and New South Wales. *Egg*—Deep purplish chocolate, irregularly blotched and freckled with a darker color. Length, barely $2\frac{1}{4}$ inches; breadth, $1\frac{3}{4}$ inches.

Family———?

Nests open, composed of twigs, lined with finer twigs and grass, and placed in thick undergrowth or scrub. Clutch, two eggs.

182. *PSOPHODES CREPITANS*—(Coach-whip Bird). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Greenish white, sparingly dotted with black and greyish black, the latter color appearing as if beneath the surface of the shell, and the spots being most numerous at the large end. In some specimens the markings assume the form of commas, small oblique dashes, and crooked Hebrew-like characters. The egg is lengthened and elegant in form. Length, 1 inch 1 line; breadth, $9\frac{1}{2}$ lines.

Birds possess other enemies than human nest-robbers, as is proved by the following instances:—One season I was encamped in a snug nook on the shores of Lake King, and discovered in a thicket the nest of a Cock-whip Bird being built; on my second visit it contained two eggs; to prove if that were the full clutch I left them for a day or two; at the end of that period my vexation can be imagined when I found the eggs gone. I was convinced that no human being had forestalled me, but came to the conclusion that they were taken by bush-rats, with which that part of the country abounded. In the Wimmera District I found the nest of a Wattle-Bird with a fresh egg, which I left to obtain the pair; and on my return they were rudely broken; the fracture bore distinct impressions of the bill of a larger bird, probably that of a crow, as they are notorious nest-robbers.

I relate another instance which was actually witnessed by a friend of mine. His attention was directed to a noise created by a pair of *Acanthizas*, and he soon discovered that they had a nest in a bracken fern, and that on a log underneath was a tiger snake partly raised up with a gracefully curved neck, thrusting its head into the side entrance of the nest and abstracting an unfledged young one, letting it drop on the ground. At the next attempt it drew forth another. My friend thought it high time to terminate this proceeding, and when looking about for some instrument to despatch the enemy his snakeship quietly decamped.

184. *SPHENOSTOMA CRISTATUM*—(Crested Wedge-Tail). *Locality*—New South Wales, Victoria, and South Australia. *Egg*—Like that of *Psophodes crepitans*, lengthened and elegant in form, ground color delicate greenish blue, thinly sprinkled with purplish black specks, particularly at the larger end. In some instances these purple black specks and markings assume forms similar to those described as occurring on the egg of *P. crepitans*. Length, $11\frac{1}{2}$ lines; breadth, $7\frac{1}{2}$ lines.

Family—LUSCINIDÆ.—Warblers.

Nests oblong and dome-shaped, with side entrance, constructed of grasses, moss, bark, spiders' old nests, &c., lined with feathers or fur and placed on the ground, in bushes, or suspended to the extremity of branches of trees. Clutch, three or four eggs.

155. *GERYGONE ALBOGULARIS*—(White-throated Gerygone). *Locality*—Queensland and New South Wales. ***Egg*—Very similar, both in size and color, to that of the *Malurus cyaneus* (Superb Warbler), white ground, and speckled with reddish brown. Length, $8\frac{1}{2}$ lines; breadth, 6 lines.

156. *GERYGONE FUSCA*—(Brown Gerygone). *Locality*—Lower Queensland, New South Wales, and Victoria. *Egg*—Minutely speckled with reddish brown on a white ground. Length, $7\frac{1}{2}$ lines; breadth, $5\frac{1}{2}$ lines.

161. *SMICRORNIS BREVIROSTRIS*—(Short-billed Smicrornis). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Dull buff, marked with extremely fine freckles at the larger end. Length, $6\frac{1}{2}$ lines; breadth, $4\frac{1}{2}$ lines. This is one of the smallest of Australian eggs.

185. *MALURUS CYANEUS*—(Superb Warbler). *Locality*—Queensland, New South Wales, Victoria, and South Australia. *Egg*—Delicate flesh-white, sprinkled with spots and blotches of reddish-brown, which are more abundant, and form an irregular zone at the larger extremity. Length, 8 lines; breadth, $5\frac{1}{2}$ lines.

186. *MALURUS LONGICAUDUS*—(Long-tailed Superb Warbler). *Locality*—Victoria, South Australia, and Tasmania. *Egg*—Similar character, but proportionately larger than that of *M. cyaneus*, of a fresh-white, blotched and spotted with markings of reddish brown, particularly at the larger end, where these form an irregular zone. Length, nearly $8\frac{1}{2}$ lines; breadth, $6\frac{1}{4}$ lines.

188. *MALURUS SPLENDENS*.—(Banded Superb Warbler). *Locality*—West Australia. *Egg*—Delicate flesh-white, thickly blotched, reddish-brown, especially at the larger end. Length, $8\frac{1}{4}$ lines; breadth, $6\frac{1}{4}$ lines.

189. *MALURUS ELEGANS*—(Graceful Superb Warbler). *Locality*—West Australia. *Egg*—Delicate flesh-white, freckled with spots of reddish-brown, which are much thicker at the larger end. Length, 8 lines; breadth, 6 lines.

190. *MALURUS PULCHERRIMUS*—(Blue-breasted Superb Warbler). *Locality*—West Australia. *Egg*—Resembles those of the other species of the genus, but the blotches very much larger.

191. *MALURUS LAMBERTI*—(Lambert's Superb Warbler.) *Locality*—Australia, except North and West. ** *Egg*—Pinkish

white, marked about the apex with coalesced patches of reddish brown. Length, $8\frac{1}{4}$ lines; breadth, 6 lines.

194. *MALURUS LEUCOPTERUS* — (White-winged Superb Warbler). *Locality*—New South Wales, Victoria, and West Australia. *Egg*—Flesh-white, finely freckled with reddish-brown, forming a zone at the larger end. Length, $7\frac{1}{2}$ lines; breadth, $5\frac{1}{2}$ lines.

195. *MALURUS LEUCONOTUS* — (White-backed Superb Warbler). *Locality*—New South Wales, South Australia, and Interior. *Egg*—Pearly white, with a zone of spots on the thicker end, and a few dots of the same tint sprinkled over the rest of the surface. Length, $7\frac{1}{4}$ lines; breadth, $5\frac{1}{2}$ lines. (Ramsay).

196. *MALURUS MELANOCEPHALUS* — (Black-headed Superb Warbler). *Locality*—Queensland. *Egg*—Roundish, white, minutely speckled all over the surface and about the apex in the form of a zone, with pinkish red. Length, $6\frac{3}{4}$ lines; breadth, $5\frac{1}{4}$ lines.

197. *MALURUS CRUENTATUS* — (*Brownii*). — (Brown's Superb Warbler). *Locality*—North Australia. *Egg*—White, and speckled with reddish dots all over the surface, but forming a zone and sometimes a patch at the thickest end. Length, $7\frac{1}{4}$ lines; breadth, $5\frac{1}{2}$ lines. (Ramsay).

201. *STIPITURUS MALACHURUS* — (Emu Wren). *Locality*—Australia, except North and Tasmania. *Egg*—Sprinkled all over with minute dots of a light reddish-brown, particularly at the larger end, where it is blotched with the same color. Some specimens are minutely freckled all over. The ground-color is a delicate white, with a blush of pink before the egg is blown. Length, $6\frac{1}{2}$ lines; breadth, $4\frac{1}{2}$ lines. I have a pair of eggs taken in Tasmania measuring in length $7\frac{1}{2}$ lines; breadth, 6 lines.

202. *SPHENURA BRACHPYTERA* — (Bristle Bird). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Ground color almost white, the whole of the surface thickly freckled with dots of blackish-brown and reddish-brown, with a few of a pale lilac tint here and there, some of the dots very minute, others larger and roundish in shape. Shape of egg oval, rather swollen, and the shell very thin. Length, 1 inch; breadth, 9 lines. (Ramsay).

203. *SPHENURA LONGIROSTRIS* — (Long-billed Bristle-bird). *Locality*—West Australia. *Egg*—Ground-color, dull brownish white, blotched and freckled with purplish brown, some of the blotches appearing as if beneath the surface, particularly at the larger end, where they are most numerous.

205. *HYLACOLA PYRRHOPYGIA* — (Red-rumped Hylacola). *Locality*—Australia, except North and West. *Egg*—Pinkish white ground, which is nearly hidden by the deep reddish or chocolate brown, spotted and clouded all over the shell, thickening

gradually towards the top, where is formed quite a thick band. Length, $9\frac{1}{4}$ lines; breadth, $6\frac{3}{4}$ lines.

207. *PYCNOPTILUS FLOCCOSUS*—(Downy Pycnoptilus). *Locality*—Victoria. ** *Egg*—Very rare. Shell thin and brittle, ground color of a uniform light chocolate or drab, with a slight blended band of a darker tint of the same color around the top. Length, 1 inch; breadth, 9 lines.

212. *CISTICOLA RUFICEPS*—(Rufus-headed Grass-warbler). *Locality*—Australia, except West, and New Guinea. ** *Egg*—Ground color beautiful bright bluish-green, sparingly blotched with comparatively large patches of red; other specimens are more finely speckled, especially about the top of the egg. Length, 7 lines; breadth, $5\frac{1}{2}$ lines.

213. *SERICORNIS CITREOGULARIS*—(White-throated Sericornis). *Locality*—Queensland and New South Wales. *Egg*—Much elongated in form, vary considerably in color, the most constant tint being a clove brown, freckled over the larger end with dark umber, frequently assuming the form of a complete band or zone. Medium length 1 inch; breadth, 8 lines.

214. *SERICORNIS HUMILIS*—(Sombre-colored Sericornis). *Locality*—Tasmania. *Egg*—Large for the size of the bird, of a reddish-white, curiously freckled and marked all over with reddish-brown, particularly at the larger end, where the markings assume the form of a zone. Length, $10\frac{1}{2}$ lines; breadth, 8 lines.

215. *SERICORNIS OSCULANS*.—(Allied Sericornis). *Locality*—Victoria and South Australia. ** *Egg*—Ground color of a warmish wash, very finely freckled with purplish-brown spots, which gradually thicken and blend towards the larger end, where they form a zone. Length, $9\frac{1}{2}$ lines; breadth, 7 lines.

216. *SERICORNIS FRONTALIS*—(White-fronted Sericornis). *Locality*—Queensland, New South Wales, Victoria, and South Australia. *Egg*—Dull flesh-white, freckled and streaked with purplish-brown, particularly at the larger end. Length, 10 lines; breadth, $7\frac{1}{2}$ lines.

218. *SERICORNIS MACULATUS*—(Spotted Sericornis). *Locality*—New South Wales, Victoria, South and West Australia. *Egg*—Reddish-white, minutely freckled and streaked with reddish-brown, particularly at the larger end. Length, 9 lines; breadth, 7 lines.

219. *SERICORNIS MAGNIROSTRIS*—(Large-billed Sericornis). *Locality*—Queensland and New South Wales. *Egg*—Ground-color varies from bluish white to dull white, with the larger end sparingly washed, freckled, and streaked with dark brown; large for the size of the bird. Length, $9\frac{1}{2}$ lines; breadth, 7 lines.

220. *ACANTHIZA PUSILLA*—(Little Brown Acanthiza). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—

Beautiful pearly white, sprinkled and spotted with very fine specks of reddish brown, forming in some instances a zone near the larger end. Length, $8\frac{1}{2}$ lines; breadth, 6 lines.

221. *ACANTHIZA DIEMENENSIS*—(Tasmanian Acanthiza). *Locality*—Tasmania. *Egg*—Beautiful pearly bluish white, sprinkled and spotted with reddish brown: in some instances the spots form a zone round the larger end. Length, $8\frac{1}{2}$ lines; breadth, 6 lines.

During my recent visit to Tasmania I had the opportunity of recording the lapse of time between the delivery of the eggs of this Acanthiza. A delivery occurred every other day thus:—first egg on Wednesday, 17th October; second and third eggs on the following Friday and Sunday respectively.

223. *ACANTHIZA APICALIS*—(Western Acanthiza). *Locality*—West Australia. *Egg*—Flesh-white, thickly freckled with reddish chestnut, the freckles becoming so numerous at the larger end as to form a complete zone. Length, 8 lines; breadth, 6 lines.

225. *ACANTHIZA INORATA*—(Plain-colored Acanthiza). *Locality*—South and West Australia. *Egg*—White color tinged with greenish grey. Length, $7\frac{1}{2}$ lines; breadth, $5\frac{1}{2}$ lines.

226. *ACANTHIZA NANA*—(Little Acanthiza). *Locality*—Australia, except North and West. *** Egg*—Smooth surface, pearly-white, and long in form, freckled all over with reddish chestnut, which is more thickly dispersed about the larger end. Length, $8\frac{1}{2}$ lines; breadth, $5\frac{1}{2}$ lines.

227. *ACANTHIZA LINEATA*—(Striated Acanthiza). *Locality*—Australia, except North and West. *** Egg*—Smooth surface, fleshy-white, very finely speckled with reddish chestnut, sometimes in form of a narrow belt round the larger end, but more frequently in the form of a thick patch or blotch exactly on the top of the egg. Length, 8 lines; breadth, 6 lines.

228. *ACANTHIZA MAGNA*—(Great Acanthiza). *Locality*—Tasmania. *Egg*—Similar to those of the other species of this genus; pearly-white, blotched with dull red, apex rounded. Length, 9 lines; breadth, $6\frac{1}{2}$ lines.

This information is supplied me by the Rev. H. T. Hull, an observing naturalist in Tasmania.

I procured a specimen in the flesh of the scarce Great Acanthiza. In a deep recess of Mount Wellington, piloted by an energetic young egg-collector, a solitary bird fell the prey of our gun. The bird, though barely $4\frac{1}{2}$ inches long, was "bagged" in triumph. This is the first skin obtained since the one Gould figured in the folio supplement to his celebrated work, the "Birds of Australia," nearly 30 years ago.

229. *GEOBASILEUS CHRYSORRHŌUS*—(Yellow-rumped Geobasileus). *Locality*—Australia and Tasmania. *Egg*—Beautiful uniform pearly-white color; but occasionally they are found

sprinkled over with very minute specks of reddish yellow, which in some instances form a zone at the larger end. Length, 9 lines; breadth, 6 lines.

This common but nevertheless interesting little bird appears to be very fond of the company of other members of the feathered race. On several occasions in Tasmania I saw its nest attached to the bottom of that of the Common Magpie. In one instance each contained young, and all appeared to live in perfect harmony. In another instance each had fresh eggs.

230. *GEOBASILEUS REGULOIDES*—(Buff-rumped Geobasileus). *Locality*—Australia, except North and West. **Egg*—Of a uniform pearly-white. Length, 8 lines; breadth, 6 lines.

234. *XEROPHILA LEUCOPSIS*—(White-faced Xerophila). *Locality*—Australia, except North and West. **Egg*—Pinkish white or fleshy ground color, thickly spotted and smudged all over (more or less) with pinkish or reddish chocolate, sometimes interspersed with deep purplish grey, and in others these markings thicken about the upper quarter of the egg. Length, $8\frac{1}{2}$ lines; breadth, $6\frac{1}{4}$ lines.

It will be observed that Mr. Gould has described for this the egg of some other bird.

235. *PYRRHOLÆMUS BRUNNEUS*—(Red Throat). *Locality*—Victoria, South and West Australia. *Egg*—Of a dull olive brown, nearly of a uniform bronze tint, usually without markings, but sometimes has an indistinct ring of minute dots on the larger end, where it forms a patch of a darker shade. Length, $9\frac{1}{2}$ lines; breadth, 7 lines. (Ramsay).

236. *ORIGMA RUBRICATA*—(Rock-Warbler). *Locality*—Queensland and New South Wales. *Egg*—Pure and glossy white. Length, $8\frac{1}{2}$ lines; breadth, $6\frac{1}{2}$ lines.

237. *CALAMANTHUS FULIGINOSUS*—(Striated Calamanthus). *Locality*—Victoria and Tasmania. *Egg*—Rather large and somewhat round in form, of a reddish wood-brown, obscurely clouded with markings of reddish brown, the larger end being darkest. Length, $10\frac{1}{2}$ lines; breadth, 8 lines.

238. *CALAMANTHUS CAMPESTRIS*—(Field Calamanthus). *Locality*—Victoria, South and West Australia. *Egg*—Ground color reddish buff, blended all over with markings of deep chestnut-brown, gradually deepening towards the larger end, where they form quite a dark top to the egg. Length, 10 lines; breadth, 7 lines.

239. *CHTHONICOLA SAGITTATA*—(Little Chthonicola). *Locality*—Australia, except North and West. *Egg*—Light cochineal-red, with a zone of blackish-brown spots at the larger end. Length, 9 lines; breadth, 7 lines.

Family—————?—Epthianuras.

Nests cup-shaped, made of grasses lined with hair, and placed in low thick bushes. Clutch, three eggs.

231. *EPHTHIANURA ALBIFRONS*—(White-fronted Epthianura). *Locality*—Australia and Tasmania. Both Mr. Gould and Mr. Ramsay state that Tasmania is not a habitat of this species, although the former admits they are very common, and breed on some of the islands in Bass's Straits. *Egg*—Beautiful white, sometimes of a pinkish tint, spotted, others irregularly marked with bright deep reddish brown at the larger end, where occasionally they form an indistinct zone. In some specimens the spots are crowded at the top, and very sparingly sprinkled on the other parts of the egg. Mr. Ramsay furnished the length, $6\frac{1}{2}$ to 7 lines; breadth, 5 lines; but the medium measurement of those I have taken in Victoria, and of those forwarded to me from Tasmania, is, length 8 lines; breadth, $6\frac{1}{2}$ lines.

232. *EPHTHIANURA AURIFRONS*—(Orange-fronted Epthianura). *Locality*—New South Wales, Victoria, and South Australia. *Egg*—From a nest and eggs in the Sydney Museum the latter appear in size and markings similar to those of the *E. albifrons*.

233. *EPHTHIANURA TRICOLOR*—(Tricolored Epthianura). *Locality*—Australia except North and West. ** *Egg*—Smaller and dumpier than those of the two preceding species, pinky white, sparingly spotted with small round distinct spots of dark pinky red, which are more numerous towards the larger end. Length, 7 lines; breadth, 6 lines.

Family—MOTACILLIDÆ.—Larks.

Nests composed of dried grasses and placed in a depression in the ground, generally beneath tufts of grass. Clutch, three or four eggs.

240. *ANTHUS AUSTRALIS*—(Australian Pipit). *Locality*—Australia and Tasmania. *Egg*—Lengthened form, greyish white, blotched and freckled with light chestnut-brown and purplish grey, the latter color appearing as if beneath the surface of the shell. Length, 11 lines; breadth, $7\frac{1}{2}$ lines.

241. *CINCLORAMPHUS CRURALIS*—(Brown Cincloramphus). *Locality*—Australia, except North and West. ** *Egg*—Ground color of a pinkish tinge, with pinkish red and purplish spots freckled over the whole surface, the purplish markings appearing under the surface of the shell. Length, $11\frac{1}{4}$ lines; breadth, $8\frac{1}{2}$ lines.

242. *CINCLORAMPHUS CANTALLANS*—(Black-breasted Cincloramphus). *Locality*—Victoria, and South Australia. ** *Egg*—Similar to that of *C. cruralis*, but, if anything, more lengthened

in form, and markings rather more pronounced. Length, 12 lines; breadth, 8 lines.

243. *PTENEDUS RUFESCENS*—(Rufous-breasted Cincloramphus). *Locality*—Australia. *Egg*—Purplish-white, very broadly marked with freckles and small blotches of deep chestnut-brown, so much so as frequently to render the blotches more conspicuous than the ground color. Length, 10 lines; breadth, $7\frac{1}{2}$ lines.

248. *MIRAFRA HORSFIELDII*—(Horsfield's Bush-Lark). *Locality*—Australia. ** *Egg*—Very like that of the *Anthus*, excepting smaller in size; completely speckled with drab or grey. Length, 9 lines; breadth, $6\frac{1}{2}$ lines.

Family———?—Grass-Birds.

Nests deep, cup-shaped, formed of swamp grasses and portions of reeds, lined with feathers and situated in bushes or reeds a few feet above the surface of the water. Clutch, three eggs.

245. *SPHENÆACUS GRAMINEUS*—(Little Grass-Bird). *Locality*—Australia and Tasmania. *Egg*—Fleshy-white, freckled and streaked all over, particularly at the larger end, with purplish red: in some instances large obscure blotches of reddish grey appear as beneath the surface of the shell. Length, nearly 8 lines; breadth, 6 lines.

Family—SYLVIADÆ.—Reed-Warblers.

Nests suspended from three reeds or in bushes a few feet from the surface of the water of swamps or rivers, deep and cup-shaped, are composed of dried reeds, &c., lined with grass. Clutch, four eggs.

246. *CALAMOHERPE AUSTRALIS*—(Reed-Warbler). *Locality*—Australia, except West and Tasmania. *Egg*—Greyish white, thickly marked all over with irregular blotches and markings of yellowish brown, umber brown, and bluish grey, intermingled together without any appearance of order or arrangement. Length, 10 lines; breadth, 7 lines.

247. *CALAMOHERPE (Calamodyta) LONGIROSTRIS*—(Long-billed Reed-Warbler). *Locality*—West Australia. *Egg*—Dull greenish white, blotched all over, but particularly at the larger end, with large and small irregularly-shaped patches of olive, some being darker than others, the light-colored ones appearing as if beneath the surface of the shell. Length, 9 lines; breadth, $7\frac{1}{2}$ lines.

Family—FRINGILLIDÆ.—Finches.

Nests dome-shaped, bulky, composed of grasses with long spout-like entrances, found in saplings or bushes. Clutch, five or six eggs. Period of incubation, eleven to fifteen days.

249. *ZONÆGINTHUS BELLUS*—(Fire-tailed Finch). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Beautiful fleshy-white, and lengthened in form. Length, $8\frac{1}{2}$ lines; breadth, $6\frac{1}{2}$ lines.

251. *STRICTOPTERA BICHENOVII*—(Bicheno's Finch). *Locality*—Australia, except West. ** *Egg*—Of a uniform soft white color. If the surface of the shell is very closely looked into, like most Finches' eggs, it will be observed to be very minutely pitted. Length, 7 lines; breadth, 5 lines.

253. *ÆGINTHA TEMPORALIS*—(Red-eye-browed Finch). *Locality*—Queensland, New South Wales, Victoria, and Tasmania. *Egg*—Beautiful fleshy-white. Length, 7 lines; breadth, $5\frac{1}{2}$ lines.

255. *AIDEMOSYNE MODESTA*—(Plain-colored Finch). *Locality*—New South Wales and Victoria. *Egg*—White. Length, 6 lines; breadth, $4\frac{1}{2}$ lines.

256. *NEOCHMIA PHAETON*—(Crimson Finch). *Locality*—North Australia. *Egg*—Pure white; five in number.

257. *STAGONOPLEURA GUTTATA*—(Spotted-sided Finch). *Locality*—Australia, except North and West. *Egg*—White, rather long in shape. Length, 9 lines; breadth, 6 lines.

258. *TENIOPYGIA CASTANOTIS*—(Chestnut-eared Finch). *Locality*—Australia. ** *Egg*—Bluish white tinge. Length, 7 lines; breadth, $5\frac{1}{2}$ lines.

264. *PŒPHILA CINCTA*—(Banded Grass-Finch). *Locality*—Queensland. *Egg*—Uniform pinky-white; five in number.

— *PŒPHILA ATROPYGIALIS*—(Grass Finch). *Locality*—North Australia. *Egg*—Shell white outside, with a faint greenish tinge inside. Length, $7\frac{1}{2}$ lines; breadth, $5\frac{1}{4}$ lines. (Ramsay.)

Family—MERULIDÆ.—Thrushes.

Nests round, open, composed of sticks, leaves, bark, and moss, and situated on or near the ground. Clutch, two to four eggs.

269. *PITTA STREPITANS*—(Noisy Pitta). *Locality*—Queensland and New South Wales. *Egg*—Pale creamy-white, marked all over with irregularly-shaped blotches of brown and deep vinous grey, the latter appearing as if beneath the surface of the shell. Length, 1 inch 3 lines; breadth, $10\frac{3}{4}$ lines.

— *PITTA MACKLOTI*—(Macklot's Pitta). *Locality*—North Australia and New Guinea. *Egg*—Creamy white, covered all

over with small speckles and streaks of a purplish hue, many of which are much paler than others, and appear as if beneath the surface of the shell. In some specimens these markings are less numerous, but in all instances are alike in character. The eggs appear to vary in size, even in the same nest, some being one inch by $\frac{13}{16}$, while others measure $1\frac{1}{8}$ by $\frac{15}{16}$ inches.

271. *CINCLOSOMA PUNCTATUM*—(Spotted Ground-Thrush). *Locality*—Australia, except North and West, and Tasmania. *Egg*—Ground-color white, blotched with large marks of olive-brown, particularly at the larger end, some of the spots appearing as if on the inner surface of the shell. Length, 1 inch 4 lines; breadth, 11 lines.

272. *CINCLOSOMA CASTANEONOTUM*—(Chestnut-backed Ground Thrush). *Locality*—New South Wales, Victoria, South and West Australia. *Egg*—Description assimilates very closely to that of the Spotted Ground-Thrush. Length, 1 inch 3 lines; breadth, 10 lines.

275. *OREOCINCLA LUNULATA*—(Mountain Thrush). *Locality*—Queensland, New South Wales, Victoria, and Tasmania. *Egg*—Ground color, light delicate green, washed and blotched at over with pinkish red or brown; these markings are somewhat thicker about the larger end. Length, 1 inch $3\frac{3}{8}$ lines; breadth, $10\frac{3}{4}$ lines.

My little experience in Tasmania taught me that some of the birds there which are also common to Australia are larger in Tasmania, particularly the Mountain Thrush. The latter's eggs also gave greater dimensions, viz.:—1 inch $4\frac{1}{4}$ lines; by $11\frac{1}{4}$ lines.

The Mountain Thrush is one of our earliest breeders. Nests with eggs have been taken in Tasmania in July when snow has covered the ground. I have also taken them during the same month in the coast ti-tree scrub, near Mordialloc. The nests are usually situated in forks or limbs of low trees, and are constructed principally of green moss, dried leaves, grass, &c., matted together with dirt and sand, and securely lined with a thick ply of grass, although no Australian bird of this Order resorts to, adds, or rebuilds its old nests year after year. I was led to believe this bird was an exception, my attention being attracted by the immense size and decayed old appearance of the foundation of some of the nests: some would measure nearly a square foot, while the cup of the nest was only 6 or 7 inches in diameter by 3 inches deep. My surmise proved correct, because I took two eggs from a certain nest and carefully marked the locality. On returning early the following season I took another pair.

Family—PARADISEIDÆ (?)—Bower-birds.

Nests—Not the bowers, as was supposed, but open structures of twigs, lined with grass and leaves, and placed in bushes on low trees. Clutch, two or three eggs.

276. PTILONORHYNCHUS HOLOSERICEUS—(Satin Bower-bird).

Locality—Queensland, New South Wales, and Victoria. * * *Egg*—Well shaped, and its character of markings may be easily imagined, and it is very similar to the well-known egg of *Mimeta viverdis* (New South Wales Oriole), only proportionately larger. The ground-color varies from a rich cream to a dirty yellowish color, irregularly spotted and blotched with umber and reddish brown, also a few purplish grey markings appear as if beneath the surface of the shell. In some specimens the blotches are very bold and the markings under the surface of a bluish-black shade. Length, 1 inch $8\frac{1}{2}$ lines; breadth, 1 inch $2\frac{1}{4}$ lines.

On the 23rd of November my young friend Mr. Lindsay Clark found, near the Bass River, Western Port, a nest of this extraordinary bower-building bird containing a clutch of two fresh eggs. He described the nest as being placed about 12 feet from the ground in a scrubby bush. The nest was loosely constructed of twigs, &c., and lined with leaves, and, on being removed from its position, fell to pieces.

About the middle of October, 1876, Mr. A. E. Cox, of Sydney, also found, at Mittagong, New South Wales, a nest placed on the top of a ti-tree stump, with two eggs, but in this case they were nearly hatched.

278. AILURÆDUS SMITHII—(Cat-bird). *Locality*—Queensland and New South Wales. *Egg*—Comparatively small for the size of the bird. The ground-color is of a delicate bluish green, sprinkled all over with light reddish brown dots and spots, larger and more crowded on the thicker end, and with also a few irregular lineal scratchy markings or hair lines. Length, 1 inch $2\frac{1}{2}$ lines; breadth, $10\frac{1}{4}$ lines. (Ramsay).

279. CHLAMYDODERA MACULATA—(Spotted Bower-bird).

Locality—Queensland, New South Wales, Victoria, and interior of South Australia. * * *Egg*—Very beautiful and most singular in appearance, like a fine piece of porcelain with hand-painted markings. The egg is nicely proportioned, although inclined to oval in shape. Ground color very light sea-green. There are three distinct characters of markings, firstly light grey blotches that appear on the inner surface of the shell; secondly, small stripes of light sienna and umber, painted, as if with a camel-hair brush, in every shape and size round and round the shell, principally zig-zagged latitudinally, but very often taking longitudinal and other directions, and, lastly, over these markings a few darker and heavier stripes and smudges of umber. Both

ends of the egg are comparatively free from markings. Length, 1 inch $7\frac{3}{4}$ lines; breadth, 1 inch 1 line.

It may not be out of place to mention that I was among the first who discovered the nest and egg of this beautiful Spotted Bower-bird, which was in October, 1877, while searching for specimens along a billabong of the River Darling, about three miles from the township of Wentworth. The nest was about 20 feet from the ground, near the top of a sapling in a thick belt of timber. The hen was sitting, and did not fly off until I had climbed within a few feet of her. I did not notice the male bird in the neighborhood. The nest was formed something like the common Butcher-bird's (*Cracticus torquatus*), composed of small sticks, and lined with smaller twigs and grass.

Since then two nests, each containing three eggs, were taken near the same locality. The nests were placed a few feet from the ground in very thick prickly bushes, locally known as Needle-bushes, but botanically as *Hakea*. I exhibited an egg of this Bower-bird at the Melbourne International Exhibition, 1880-1.

Family—ORIOLIDÆ.—Orioles.

Nests cup-shaped, composed of bark strongly interwoven, lined with grass and hair or wool, and suspended to pedulant branches. Clutch, three or four eggs.

283. *MIMETA VIRIDIS*—(New South Wales Oriole). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Ground color varies from a rich cream to a dull white or very light brown, minutely dotted and blotched with umber and blackish brown, and instances with faint lilac spots, which appear beneath the surface, all over in some instances, but generally the spots are more numerous at the larger end, where they form an indistinct band. Length, 1 inch 4 lines; breadth, 11 lines.

284. *MIMETA AFFINIS*. *Locality*—North Australia and Queensland. *Egg*—Beautiful bluish white, sparingly spotted all over with deep umber brown and bluish grey; the latter color appears as if beneath the surface of the shell. Length, 1 inch, $3\frac{3}{4}$ lines; breadth, 11 lines.

Family———?

Nests basin-shaped, composed of mud and grass, and placed on horizontal limbs. Clutch, five to seven eggs.

288. *CORCORAX MELANORHAMPHUS*—(White-winged Corcorax). *Locality*—Australia, except North and West. *Egg*—Yellowish white, boldly blotched all over with olive and purplish brown, the latter tint appearing as if beneath the surface of the shell. Length, $1\frac{1}{2}$ inches; breadth, 1 inch 1 line.

289. STRUTHIDEA CINEREA—(Grey Struthidea). *Locality*—New South Wales, North and South Australia. *Egg*—Color white, sparingly blotched, principally at the larger end, with reddish brown, purplish grey, and greenish grey, some of the blotches appearing as if they had been laid on with a soft brush. Length, 1 inch 2 lines; breadth, 10 lines.

Family—CORVIDÆ.—Crows.

Nests composed of large sticks, and usually situated near the tops of the largest trees. Clutch, four eggs.

290. CORVUS (*Corone*) AUSTRALIS—(White-eyed Crow). *Locality*—Australia and Tasmania. *Egg*—Very long form and of a very pale green color, more or less spotted and smudged all over, but principally at the larger end, with umber brown. Length, 1 inch 10 lines; breadth, 1 inch 3 lines.

— CORVUS (*Corone*) CORONOIDES—(Hazel-eyed Crow). *Locality*—Australia and Tasmania. ** *Egg*—Similar to foregoing, of beautiful pale green, freckled all over with dark olive or umber. Some specimens are heavily blotched with black. Length, 1 inch 9 lines; breadth, 1 inch 3 lines.

Some ornithologists believe these crows to be one and the same species. The following is a memorandum I received from Mr. E. P. Ramsay on the subject:—"Re Crows, *Corvus coronoides* has white bases to feathers; *C. Australis*, base of feathers dusky or blackish brown."

Family—STURNIDÆ.

Nests congregated on the branches of one tree. They are somewhat oval in form, slightly compressed, rounded above and below, deepening to a neck, by the end of which they are suspended; the entrance is in the widest part; they are constructed as portions of climbing plants matted and woven together with finer pieces, leaves, and fibrous material. Clutch, two or three eggs.

291. COLORNIS MELALLICA.—(Shining Colornis). *Locality*—North Australia and New Guinea. *Egg*—Bluish grey, speckled with reddish pink, chiefly at the larger end; some have scarcely any markings, others a few minute dots only. Length, 1 inch; breadth, $9\frac{1}{2}$ lines.

Family—CRATEROPODIDÆ?

Nests large, dome-shaped, composed of twigs, spouted side-entrance, lined with bark, grasses, &c., situated in saplings or bushes. Clutch, four eggs.

292. POMATOSTOMUS TEMPORALIS — (Temporal Pomatorhinus). *Locality*—Australia, except West. *Egg*—Buffy

brown, clouded with dark brown and purple, and streaked with hair-like lines of black, which generally have a tendency to run round the egg; in some instances, however, they take a diagonal direction, and give the surface a marble-like appearance. Length, 1 inch 1 line; breadth, 9 lines.

293. *POMATOSTOMUS RUBECULUS*—(Red-breasted Pomatorhinus). *Locality*—North Australia. * *Egg*—Clouded with light purplish grey, over which is streaked hair-like lines of dark brown, similar to those on the egg of *P. temporalis*. Length, 1 inch $1\frac{3}{4}$ lines; breadth, $8\frac{3}{4}$ lines.

294. *POMATOSTOMUS SUPERCILIOSUS*—(White eye-browed Pomatorhinus). *Locality*—Australia. *Egg*—Very like those of the same genus, the ground color being olive-grey, clouded with purplish brown, and streaked with similar hair-like lines of dark black. Length, $11\frac{1}{2}$ lines; breadth, 8 lines.

295. *POMATOSTOMUS RUFICEPS*—(Chestnut-crowned Pomatorhinus). *Locality*—New South Wales, Victoria, and South Australia. *Egg*—Ground color of a very faint tinge of green; the blackest hair-lines are finer and closer together, nearly obscuring the ground color. Some specimens have a pinkish chocolate tinge. Length, nearly 1 inch; breadth, 9 lines. (Ramsay).

Family—MELIPHAGIDÆ.—Honey-eaters.

Nests cup-shaped, variously composed of grasses, bark, spiders' old nests, &c., lined with finer grasses, bark, hair, wool, &c.; also variously situated, some species in forked branches of trees, some suspended by the rims, others in bushes. Clutch, two to three eggs.

296. *MELIORNIS NOVÆ-HOLLANDIÆ*—(New Holland Honey-eater). *Locality*—Queensland, New South Wales, Victoria, South Australia, and Tasmania. *Egg*—Pale buff, thinly spotted and freckled with deep chestnut-brown, particularly at the larger end, where they do not unfrequently assume the form of a zone. Length, 10 lines; breadth, 7 lines.

297. *MELIORNIS LONGIROSTRIS*—(Long-billed Honey-eater). *Locality*—West Australia. *Egg*—Ground color delicate buff, with the larger end clouded with reddish buff, and thickly spotted and blotched with chestnut-brown and chestnut-red arranged in the form of a zone. Length, 9 lines; breadth, 7 lines.

298. *MELIORNIS SERICEA*—(White-cheeked Honey-eater). *Locality*—Queensland, New South Wales, and Victoria(?). ** *Egg*—Of a pinky flesh tint, and of a slightly darker shade at the larger end, where also is a zone of pinkish-red and sometimes chestnut-brown spots. Length, 8 lines; breadth, $6\frac{1}{2}$ lines.

299. *MELIORNIS MYSTACALIS*—(Moustached Honey-eater). *Locality*—West Australia. *Egg*—Dull reddish buff, spotted

very distinctly with chestnut and reddish brown, interspersed with obscure dashes of purplish grey. Length, 9 lines; breadth, 7 lines.

300. LICHMERA (*Phylidonyris*) AUSTRALASIANA—(Tasmanian Honey-eater). *Locality*—Queensland, New South Wales, Victoria, South Australia, and Tasmania. ** *Egg*—Tasmanian specimens.—Of a rich flesh color or buff, being of a darker shade at the upper end, where it is also rather boldly blotched and spotted in the form of a zone, with pinkish-red, umber, and grey, the latter color appearing as if beneath the surface of the shell. Length, $9\frac{1}{2}$ lines; breadth, 7 lines.

Specimens taken by myself in Victoria are smaller in size and more beautiful and delicate in character, being of a lovely flesh tint, and zoned at the larger end with spots of dark pink and chestnut, also a few violet-like spots appearing under the surface of the shell. Length, $8\frac{3}{4}$ lines; breadth, $6\frac{1}{2}$ lines.

301. GLYCIPHILA FULVIFRONS—(Fulvous-fronted Honey-eater). *Locality*—Queensland, New South Wales, Victoria, South Australia, and Tasmania. *Egg*—Large for the size of the bird, and is often of a lengthened form; and sometimes quite white, without the least trace of spots, but they are generally blotched with marks of chestnut-red; occasionally this color is very faint and spread over the surface of the shell as if stained with it; in other instances the marks are very bold and decided, forming a strong contrast to the whiteness of the other part of the surface. Length, $10\frac{1}{2}$ lines; breadth, $7\frac{1}{2}$ lines.

302. GLYCIPHILA ALBIFRONS—(White-fronted Honey-eater). *Locality*—New South Wales, Victoria, South and West Australia. *Egg*—Ground color delicate buff, clouded with a reddish tint at the larger end, and distinctly spotted with chestnut and purplish grey, thickly disposed at the larger end, but very sparingly over the rest of the surface. Length, $9\frac{1}{2}$ lines; breadth, 7 lines.

— GLYCIPHILA SUBFASCIATA—(Dusky Honey-eater). *Locality*—Queensland. *Egg*—Pure white, with a few dots of black sprinkled over the larger end. Length, 9 lines; breadth, 6 lines.

Mr. Ramsay states that this is the only bird of the Australian *Meliphaginæ* that has been met with which constructs a dome-shaped nest.

304. STIGMATOPS OCULARIS—(Brown Honey-eater). *Locality*—Queensland and New South Wales. *Egg*—Varies considerably in coloring, some being pure white without a trace of spots or markings, others having a zone round the larger end formed of freckled markings of light reddish-brown; others, again, are thinly sprinkled with this color over the whole surface. Length, $7\frac{3}{4}$ lines; breadth, 6 lines.

306. PTILOTIS LEWINII—(Lewin's Honey-eater). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Pearly

white, spotted with purplish brown, the spots forming a zone at the larger end. Length, $11\frac{1}{2}$ lines; breadth, 8 lines.

307. *PTILOTIS SONORA*—(Singing Honey-eater). *Locality*—Australia. *Egg*—Light yellowish buff, thickly freckled with small indistinct reddish-brown marks, or of a nearly uniform fleshy buff without spots or markings, but a deeper tint at the larger end. Length, 11 lines; breadth, 8 lines.

310. *PTILOTIS FLAVIGULA* (*flavicollis*).—(Yellow-throated Honey-eater). *Locality*—New South Wales, Victoria, South Australia, and Tasmania. *Egg*—Most delicate fleshy buff, rather strongly but thinly spotted with small, roundish, prominent dots of chestnut, intermingled with which are a few indistinct dots of purplish grey. Length, 11 lines; breadth, $8\frac{1}{4}$ lines.

311. *PTILOTIS LEUCOTIS*—(White-eared Honey-eater). *Locality*—Queensland, New South Wales, Victoria, South and West Australia. *Egg*—Almost white, or of a uniform delicate fleshy tint, with a few indistinct markings of pinkish red at the larger end; but sometimes the markings, although few, are pronounced, and not altogether confined to the larger end. Length, $10\frac{1}{2}$ lines; breadth, $7\frac{3}{4}$ lines.

The nest is generally placed in thick scrub near the ground. It is deep and cup-shaped, and composed of a mixture of bark, grass, and spiders' old nests. The inside is lined with a thick warm layer of cow-hair wonderfully woven together. No doubt before cattle were introduced to Australia, this beautiful Honey-eater used for the lining the hair or fur of the Kangaroo and other indigenous animals.

I have observed the birds plucking the hair off while perched on the backs of cattle; and a rather difficult task it sometimes is for the bird to effect lodgment, especially if a selected cow be not in a very amicable mood, when she tosses her head angrily and continually switches her tail from flank to flank while the bird flutters over. It is highly amusing to see it dodge the action of the long appendage of the animal, and between each lash pluck a few hairs till a mouthful is procured, then fly to its nest.

312. *PTILOTIS AURICOMIS*—(Yellow-tufted Honey-eater). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Pale flesh-tint, darkest at larger end, where they are also spotted and blotched with markings of a much deeper hue, inclining to salmon color; in some these markings form a zone, in others one irregular patch, with a few dots over the rest of the surface. Length, 10 lines; breadth, 8 lines.

314. *PTILOTIS ORNATA*—(Graceful Ptilotis). *Locality*—Victoria, South and West Australia. *Egg*—Deep salmon color, becoming paler at the smaller end, and minutely freckled with reddish-brown, particularly at the larger end. Length, $9\frac{1}{2}$ lines; breadth, 7 lines.

315. *PTILOTIS PLUMULA* — (Plumed Ptilotis). *Locality* — South and West Australia. *Egg* — Pale salmon color, with a zone of a deeper tint at the larger end, and the whole freckled with minute spots of a still darker hue. Length, 10 lines; breadth, 7 lines.

318. *PTILOTIS PENICILLATA* — (White-plumed Honey-eater). *Locality* — Queensland, New South Wales, and South Australia. **Egg* — Lengthened in form. Ground color light buff or pinkish, sparingly marked with distinct round spots of reddish-brown and chestnut, with a few purplish grey spots appearing under the surface of the shell, all the markings more inclined to congregate towards the larger end. Length, 10 lines; breadth, 7 lines.

319. *PTILOTIS FUSCA* — (Fuscon Honey-eater). *Locality* — Queensland, New South Wales, and Victoria. **Egg* — Of a beautiful rich salmon color, with a few streaky markings, more particularly on the apex, of pinkish-brown or chestnut. Length, 9 lines; breadth, $6\frac{1}{2}$ lines.

320. *PTILOTIS CHRYSOPS* — (Yellow-faced Honey-eater). *Locality* — Queensland, New South Wales, and Victoria. *Egg* — Lengthened in form and of a deep reddish buff, strongly marked at the larger end with deep chestnut-red and purplish grey; the remainder of the surface ornamented with large spots and blotches of the same color somewhat thinly dispersed. Length, $10\frac{1}{2}$ lines; breadth, 7 lines.

323. *PLECTORHYNCHIA LANCEOLATA* — (Lanceolated Honey-eater). *Locality* — Queensland, New South Wales, Victoria, and South Australia. *Egg* — Lengthened in form and of a fleshy white, very minutely sprinkled with reddish buff, forming an indistinct zone at the larger end. Length, $11\frac{1}{2}$ lines; breadth, 8 lines.

324. *MELIPHAGA PHRYGIA* — (Warty-faced Honey-eater). *Locality* — Queensland, New South Wales, and Victoria. *Egg* — Deep yellowish buff, marked all over with indistinct spots and irregular blotches of chestnut red and dull purplish grey, particularly at the larger end, where they frequently form a zone. Length, 11 lines; breadth, $8\frac{1}{2}$ lines.

325. *LICHNOTENTHA (Certhionyx) PICATA (leucomelas)* — (Pied Honey-eater). *Locality* — New South Wales, Victoria, and South and West Australia. *Egg* — Of a beautiful pale greenish blue, with rich reddish dots, which cluster and form irregular patches towards the thicker end, but do not form a zone. Length, $9\frac{3}{4}$ lines; breadth, $7\frac{1}{4}$ lines. (Ramsay.)

327. *CONOPHILA ALBOGULARIS* — (White-throated Honey-eater). *Locality* — North Australia. *Egg* — Rather lengthened in form, and not very unlike that of the *Malurus cyaneus* in the color and disposition of markings; ground color being white,

thinly freckled all over with bright chestnut-red, particularly at the larger end. Length, 9 lines; breadth, 6 lines.

328. *CONOPOPHILA RUFOGULARIS*—(Red-throated Honey-eater). *Locality*—North Australia. *Egg*—Pearly white, rather thickly spotted with bright reddish brown. Length, $7\frac{3}{4}$ lines; breadth, $5\frac{3}{4}$ lines. (Ramsay).

329. *ACANTHOGENYS RUFOGULARIS*—(Spiny-cheeked Honey-eater). *Locality*—New South Wales, Victoria, South and West Australia. *Egg*—Dull olive buff, sparingly but strongly dotted with umber or chestnut-brown and bluish grey, the markings being most numerous at the larger end. Length 1 inch $1\frac{1}{2}$ lines; breadth 9 lines (large). Length $11\frac{1}{2}$ lines; breadth $8\frac{1}{4}$ lines (small).

330. *ANTHOCHÆRA INAURIS*—(Wattled Honey-eater). *Locality*—Tasmania. *Egg*—Pale salmon-color, sprinkled all over, but particularly at the larger end, with small specks and blotches of yellowish red, and here and there with grey. Length, 1 inch 5 lines; breadth, $11\frac{1}{2}$ lines. The egg is very much like that of *A. carunculata*, but is more thickly blotched with yellowish red.

331. *ANTHOCHÆRA CARUNCULATA*—(Wattled Honey-eater). *Locality*—Queensland, New South Wales, Victoria, South and West Australia. *Egg*—Ground color reddish buff, very thickly dotted with distinct markings of deep chestnut, umber, and reddish brown, interspersed with a number of indistinct marks of blackish grey, which appear as if beneath the surface of the shell. Length, 1 inch 3 lines; breadth, $10\frac{1}{2}$ lines.

Eggs taken in New South Wales are somewhat larger than those from Western Australia, and have markings of a blotched rather than of a dotted form, and principally at the larger end.

332. *ANELLOBIA MELLIVORA*—(Brush Wattle Bird). *Locality*—Australia, except North and West, and Tasmania. *Egg*—Beautiful salmon color, strongly blotched at the larger end, and here and there over the remainder of the surface with deep chestnut-brown. Length, 1 inch 1 line; breadth, 9 lines.

333. *ANELLOBIA LUNULATA*—(Lunulated Wattle Bird). *Locality*—West Australia. *Egg*—Ground color a full reddish buff, thinly spotted and marked with deep chestnut-brown and chestnut-red, some of the spots and markings appearing as if beneath the surface of the shell, and being most thickly disposed near the larger end. Length, 1 inch 2 lines; breadth, $9\frac{1}{2}$ lines.

334. *TROPIDORHYNCHUS CORNICULATUS*—(Friar Bird). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Pale salmon color, with minute spots of a darker tint, principally about the larger end. Length, 1 inch 3 lines; breadth, $10\frac{1}{2}$ lines.

335. *TROPIDORHYNCHUS BUCEROIDES*—(Helmeted Friar-Bird). *Locality*—North Australia. ** *Egg*—Very much like

that of the egg of its more southern representative (*T. corniculatus*), only in shape a little more swollen about the centre. Ground color of a pale or sickly salmon color, with a few indistinct cloudy markings of dull chestnut and purplish grey: the majority of these markings are upon the apex. Length, 1 inch $2\frac{1}{2}$ lines; breadth, $10\frac{3}{4}$ lines.

337. *TROPIDORHYNCHUS (Philemon) CITREOGULARIS* — (Yellow-throated Friar Bird). *Locality* — Australia, except South and West. ****Egg** — Easily distinguished from any of the other Honey-eaters' eggs. Ground color is of a uniform deep rich purplish flesh color or purplish buff, smudged over with blotches and patches of pinkish red and greyish-purple, the latter appearing as if on the inner surface of the shell. Over these markings and about the top end are a few blotches of umber of different shades. Length, 1 inch 1 line; breadth, 9 lines.

338. *TRIPODORHYNCHUS (Philemon) SORDIDUS* — (Sordid Friar-Bird). *Locality* — North Australia. *Egg* — Of a rich salmon red, spotted with a darker tint, some of the spots fleecy, confluent, and distributed alike all over the surface of the shell, rather closer near the thicker end but not forming a zone there. Length, 1 inch; breadth, 9 lines. (Ramsay).

339. *ACANTHORHYNCHUS TENUIROSTRIS* — (Spine-bill). *Locality* — Queensland, New South Wales, Victoria, South Australia, and Tasmania. *Egg* — Lengthened and pointed in form and of a delicate buffy white, increasing in depth of color towards the larger end; in some instances marked with a zone of reddish chestnut spots shaded with indistinct markings of grey, intermingled with very minute ink-like dots. Length, 9 lines; breadth, 6 lines.

340. *ACANTHORHYNCHUS SUPERCILIOSUS* — (White-eyebrowed Spine-bill). *Locality* — West Australia. *Egg* — Ground color; in some instances is a delicate buff, in others a very delicate bluish white, with a few specks of reddish-brown distributed over the surface, these specks being most numerous at the larger end, where they frequently assume the form of a zone. Length, 9 lines; breadth, $6\frac{1}{2}$ lines.

341. *MYZOMELA SANGUINOLENTO* — (Sanguineous Honey-eater). *Locality* — Australia except North and West. ****Egg** — Ground color pearly white, speckled, more particularly at the larger end, with reddish chestnut and a few spots of bluish grey appearing under the surface of the shell. Length, $7\frac{1}{2}$ lines; breadth, $5\frac{3}{4}$ lines.

344. *MYZOMELA (Cassomelas) NIGRA* — (Black Honey-eater). *Locality* — Australia. *Egg* — Light brownish buff, encircled at the centre with a band of brown, produced by numerous small blotches of that color, which appear as if beneath the surface of the shell. Length, 7 lines; breadth, $5\frac{1}{2}$ lines.

346. *ENTOMYZA CYANOTIS*—(Blue-faced Honey-eater). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Of a rich salmon color, irregularly spotted with rust-brown. Length, 1 inch 3 or 4 lines; breadth, 11 lines.

I can bear testimony to the curious fact respecting the nidification of this bird mentioned by Mr. Gould, namely, that of constructing its nest in the deserted large dome-shaped nest of the *Pomatostomus temporalis*. In the beginning of September 1881, in the Sandhurst district, I took two fresh eggs from the nest of the Honey-eater, which was made of stringy bark and grass, and placed in a depression on the top of an old nest of the *Pomatostomus*.

347. *MELITHREPTUS VALIDIROSTRIS*—(Strong-billed Honey-eater). *Locality*—Tasmania. *Egg*—Ground-color of a lovely pinkish tinge or flesh color, sparingly spotted and blotched, especially about the larger end, with pinkish brown and greyish purple, the latter appearing as if under the surface of the shell. Length, $10\frac{1}{2}$ lines; breadth, $7\frac{1}{2}$ lines.

I have described this egg from my own specimens, as I failed to reconcile Mr. Gould's description with them.

348. *MELITHREPTUS GULARIS*—(Black-throated Honey-eater). *Locality*—Australia, except North and West. ** *Egg*—Of a pale flesh color, sparingly speckled with spots of chestnut, which are inclined to form a cloud at the larger end, and where also appear a few purplish spots under the surface of the shell. Length, 9 lines; breadth, $6\frac{1}{2}$ lines.

349. *MELITHREPTUS LUNULATUS*—(Lunulated Honey-eater). *Locality*—Australia, except North and West. *Egg*—Pale buff, dotted all over, but particularly at the larger end, with distinct markings of rich reddish brown and chestnut red, among which are a few clouded markings of bluish grey. Length, 9 lines; breadth, $6\frac{1}{2}$ lines.

— *MELITHREPTUS BREVIROSTRIS*—(Brown-headed Honey-eater). *Locality*—Queensland, New South Wales, and Victoria. ** *Egg*—Deep flesh color or pinkish buff, which is of a darker shade at the larger end, where it is also sparingly spotted or splashed with reddish chestnut in the form of a zone, also a few specks appear here and there over the shell. Length, $8\frac{1}{2}$ lines; breadth, 7 lines.

Hitherto our leading ornithologists did not include Victoria as a habitat of this Honey-eater. In 1880 I noticed it rather abundant in some parts of the Sandhurst district, and in the following year specimens were placed in the Melbourne Museum; since, I have noticed them in various parts of the colony. I succeeded in obtaining its nest. It contained two eggs, and was suspended to the extreme end of a swaying branch of a box tree (*Eucalyptus viminalis*). The nest was composed of grass thickly woven in and out with wool and hair, which I have seen the bird pull out of the live animals. On one occasion a party of us

were out, and were attracted by the lively actions of this curious little Honey-eater on the back of a Native Bear (*Koala*) that had taken up its position in the fork of a tolerably high gum. The bird was clinging on in a very comical manner, and busily plucking the fur off. Wishing to rob the animal of its furry coat we fired a shot, and, although we hit, did not dislodge the bear; the shot merely frightened our feathered friend on to a neighbouring branch, and before we were re-loaded it had commenced operations on the back of the bear again.

350. *MELITHREPTUS CHLOROPSIS*—(Swan River Honey-eater). *Locality*—West Australia. *Egg*—Deep reddish buff, thinly spotted all over, but particularly at the larger end, with dark reddish brown, some of the spots being indistinct, while others were very conspicuous. Length, $9\frac{1}{2}$ lines; breadth, $6\frac{1}{2}$ lines.

353. *MYZANTHA GARRULA*—(Garrulous Honey-eater). *Locality*—Australia, except North and West, and Tasmania. *Egg*—Bluish white, marked all over with reddish brown, without any indication of the zone at the larger end so frequently observable in the eggs of the other species. Length, 1 inch 1 line; breadth, $9\frac{1}{2}$ lines.

354. *MYZANTHA OBSCURA*—(Sombre Honey-eater). *Locality*—South and West Australia. *Egg*—Rich orange buff, obscurely spotted and blotched with a deeper tint, particularly at the larger end. Length, $11\frac{1}{2}$ lines; breadth, 9 lines.

356. *MYZANTHA FLAVIGULA*—(Yellow-throated Miner). *Locality*—New South Wales, Victoria, and South Australia. ** *Egg*—Ground color of a deep rich pinkish-buff or salmon color, minutely freckled and clouded all over with pinkish red, chestnut, and purplish spots, these markings being more thickly disposed about the larger end. The purplish markings appear as if under the surface of the shell. Length, $12\frac{1}{2}$ lines; breadth, 9 lines.

357. *MANORHINA MELANOPHRYS*—(Bell-bird). *Locality*—Queensland, New South Wales, and Victoria. ** *Egg*—Beautiful rich flesh color, sparingly smudged and spotted with rich chestnut and reddish brown, a few purplish brown markings appearing as if under the shell's surface. Length, $10\frac{1}{2}$ lines; breadth, 7 lines.

Bell-birds are very plentiful along the north shore of Lake King, Gippsland, especially on the slopes of the dark gullies running up from the lake. There they appear to breed very early. In the middle of October I found all the season's birds fully grown and flying about with their respective parents. I could not find a single nest with eggs, although I found great numbers of old nests, sometimes two or more in a bush. Any site seems to be chosen for the nest, from scrub and bushes twelve feet high down to the common bracken fern. Some of the nests are crudest and simplest of all the Honey-eaters I know,

being simply constructed of just sufficient grass to ensure the safety of the eggs, and suspended by the rim to some convenient twigs. They are sometimes patched and interwoven with bits of moss and lichen.

Family—PROMEROPIDÆ.—Sun-birds, &c.

Nests pensile, side entrance, and suspended to branches of foliage. They are composed of cotton-like substance, bark, and various fibrous material.

358. *DICÆUM* (*Microchelidon*) *HIRUNDINACEUM*—(Swallow *Dicæum*). *Locality*—Australia and New Guinea. *Egg*—Ground color dull white, with very minute spots of brown scattered over the surface. Length, 9 lines; breadth, $5\frac{1}{2}$ lines.

From two different parts of Queensland I received authenticated eggs of this species. In both cases they were of a uniform dull chalky white, and not in any way marked as mentioned by Gould.

359. *NECTARINLA* (*Cryptostomus*) *AUSTRALIS*—(Australian Sun-bird). *Locality*—North Australia and New Guinea. *Egg*—Pear-shaped, generally and equally mottled with obscure dirty brown on a greenish-grey ground. Length, about 9 lines; breadth, 6 lines.

Family———?—*Zosterops*.

Nests round, deep, cup-shaped, composed of grasses, moss, wool, neatly lined with fibrous roots and grasses, and generally suspended in branches of bushes or trees. Clutch, three eggs.

It is remarkable that some of our authorities have not created a distinct family name for the genus *Zosterops*. Six species of these interesting little birds are known to inhabit Australia, and others the Islands of the Western Pacific. The British Museum and others have placed them a sub-family to the *Meliphagidæ* or Honey-eaters, the eggs of which are invariably pinkish or salmon-colored and spotted, whereas the *Zosterops* are of a uniform blue.

360. *ZOSTEROPS* *CÆRULESCENS*—(Grey-backed *Zosterops*). *Locality*—Australia, except North and West, and Tasmania. *Egg*—Beautiful uniform pale blue. Length, $8\frac{1}{2}$ lines; breadth, 6 lines.

361. *ZOSTEROPS* *GOULDI*—(Green-backed *Zosterops*). *Locality*—West Australia. *Egg*—Greenish blue without spots or markings. Length, 8 lines; breadth, 6 lines.

Family—CERTHIADÆ—Creepers, &c.

Nests—*Climacteres*, composed of soft grass, fur, and feathers, and placed far down hollow branches or stumps. Clutch, three eggs. *Sittellæ*—Cup-shaped, composed of downy substances. On the outside is worked on, by cobwebs and other sticky matter, small pieces of bark like so many scabs. These so closely assimilate to the bark of the upright dead limb on which the nest is generally situated as to render its detection extremely difficult. Clutch, three eggs.

366. *CLIMACTERIS SCANDENS*—(Brown Tree-creeper). *Locality*—Australia, except North and West. *Egg*—Reddish flesh-color, thickly blotched all over with reddish brown. Length, $10\frac{1}{2}$ lines; breadth, $8\frac{1}{2}$ lines.

367. *CLIMACTERIS RUFA*—(Rufous Tree-creeper). *Locality*—West Australia. *Egg*—Pale salmon color, thickly blotched all over with reddish brown. Length, 11 lines; breadth, $8\frac{1}{2}$ lines.

371. *CLIMACTERIS LEUCOPHÆA*—(White-throated Tree-creeper). *Locality*—Australia, except North and West. *Egg*—Dull white, thinly speckled with fine spots of rich brown, and a few larger blotches of the same color. Length, 10 lines; breadth, 8 lines.

372. *ORTHONYX SPINICAUDUS*—(Spine-tailed Orthonyx). *Locality*—Queensland, New South Wales, and South Australia. *Egg*—White and disproportionately large.

373. *SITTELLA CHRYSOPTERA*—(Orange-winged Sittella). *Locality*—Australia, except North and West. *** Egg*—Smooth shell and bluish white ground color, mottled all over with slate colored spots and blotches of different shades. Length, 8 lines; breadth, $6\frac{1}{2}$ lines.

376. *SITTELLA PILEATA*—(Black-capped Sittella). *Locality*—New South Wales, Victoria, South and West Australia. *Egg*—Whitish color, with circular green spots irregularly distributed over the whole surface.

Family—CUCULIDÆ.—Cuckoos.

378. *CACOMANTIS PALLIDUS*—(Pallid Cuckoo). *Locality*—Australia and Tasmania. **Egg*—Of a uniform pale flesh color, with a darker wash of the same tint at the larger end; sometimes a few chestnut spots appear here and there over the shell. Length, 11 to 12 lines; breadth, 8 to 9 lines.

I am sorry Mr. Gould's description is hardly accurate. Therefore I have adopted my own. He also mentioned that among the foster-parents of this Cuckoo are the various *Maluri* and *Acanthizæ*. The egg is never found in these dome-shaped

nests, but in open cup-shaped ones, generally of the Honey-eaters. I have taken them in that of *Ptilotis penicillata* (White-plumed Honey-eater), and on one occasion in that of *Mimeta viridis* (Oriole). They have also been found in the *Melithrepti* and other *Ptilotes*, *Anellobia mellivora* (Brush Wattle-bird), *Acanthorhynchus tenuirostris* (Spine-bill), *Myzantha garrula* (Garrulous Honey-eater), and sometimes in Tasmania, in the nest of *Amaurodryas vittata* (Dusky Robin).

379. CACOMANTIS (*Ololygon*) FLABELLIFORMIS (Fan-tailed Cuckoo). *Locality*—Australia and Tasmania. *Egg*—Inclined to oval in form, of a fleshy white sprinkled all over with fine pinkish red spots, which are blended about the upper quarter so as to form a narrow belt or zone. These markings by age become purplish brown. Length, $10\frac{1}{2}$ lines; breadth, $7\frac{1}{2}$ lines.

It is not on record that an egg of this Cuckoo has been taken in Australia, or which are its foster parents. Mr. Gould has mentioned one of the Honey-eaters, but I think that can be proved to be an error. In Tasmania its foster parents are generally *Acanthiza Diemenensis* (Tasmanian Acanthiza), but sometimes *Malurus longicaudus* (Superb Warbler) and *Sericornis humilis* (Sombre Sericornis). An interesting question here crops up—How can this Cuckoo, a bird about 9 inches long, including a tail 5 inches, enter or place its eggs in the small dome-shaped nest of the Acanthiza, which structure over all is not more than 4 inches in diameter, with a small side entrance that will hardly admit of one's finger?

It is impossible for the Cuckoo to enter the nest, and nests taken containing its egg have been carefully observed, and the entrance was in no case enlarged.

Therefore, after giving this matter mature consideration I have come to the conclusion that the Cuckoo must lay its egg in some convenient spot, then transfer and deposit it in the Acanthiza's nest with its bill.

And in proof of this assertion I quote the following notes from the diary of my friend Mr. (now Rev.) H. T. Hull:—

"6th Oct., 1877.—Found nest of *Acanthiza Diemenensis* with egg of *Cuculus cinereus* (now called *Cacomantis flabelliformis*). The three eggs of the *Acanthiza* were all dented as if the larger eggs had been roughly deposited on the top of them."

"15th. Nov., 1879.—Found nest of *Acanthiza Diemenensis*, two eggs broken, with young far advanced, but dead; fresh egg of Cuckoo (*Cinereus*)."

Further, my sterling friend Mr. H. A. Smith, of Batesford, informed me that on one occasion he shot a Pallid Cuckoo and actually took its egg from the back of its throat or gape. The egg was fractured by the fall. Evidently the bird had laid the egg and was in the act of conveying it to some suitable nest. In the case of this Cuckoo, too, it would be a difficult task to deposit an egg in a small Honey-eater's nest were it delivered in

the usual manner. I also venture my opinion, with regard to the smaller Bronze Cuckoos, that a similar performance (that of dropping the egg in the nest with the aid of the bill) occurs. It cannot be otherwise, for instance, when deposited in the dome-shaped nest of the little Gerygone with its small side-entrance.

Since reading the foregoing remarks before the "Field Naturalists' Club" I extracted the following from an interesting article, on the architectural tastes of birds, by M. Oustalet of France:—

"The cuckoo watches the moment when the mother quits the nest, then laying its egg seizes it by its large mandibles, passes it into its throat with the agility of a conjuror, and flies to deposit it delicately in the stranger's nest."

Therefore it would appear that this proclivity in the European Cuckoo is exhibited in its Australian representatives.

While in Tasmania, the overseer at "Ridgeside" brought under my notice a nest of the Tasmanian *Acanthiza* in a gorse hedge from which he had just abstracted the egg of the Fan-tailed Cuckoo. The specimen was lighter speckled than others I had seen. The building of the nest had apparently just been completed and appropriated first by the Cuckoo. It is strange to say that although the entrance of the nest was enlarged to abstract the Cuckoo's egg it did not offend the little *Acanthiza*, because three days afterwards she laid her first egg, and my subsequent visits proved she had completed her complement.

383. *LAMPROCOCYX* (?) *PLAGOGUS* (*lucidus*)—(Bronze Cuckoo). *Locality*—Australia, Tasmania, and New Guinea. *Egg*—Clear olive-brown, slightly paler at the smaller end: the olive-brown can be easily removed by wetting, and will reveal a uniform light bluish shell. Length, $8\frac{1}{4}$ lines; breadth, 6 lines.

385. *LAMPROCOCYX* *BASALIS*—(Narrow-billed Bronze Cuckoo). *Locality*—Australia, except North-West and Tasmania. *Egg*—Oval and fleshy white, speckled all over with fine pinkish red spots, which become darker by age. Length, $8\frac{1}{4}$ lines; breadth, 6 lines.

Mr. Gould remarks: "I leave to the rising ornithologists of Australia the task of investigating the subject, and of informing the scientific world whether there be any difference in the eggs of the two Bronze Cuckoos." From the foregoing descriptions it will be noticed there is a decided difference; the eggs are totally dissimilar except in shape and size. Notwithstanding, the birds bear a great similarity, about the same size and color, only one has a narrower bill and some minor difference on the tail feathers. Now that the eggs are known, it would be of great interest if some oologist could explain the anomaly in their characters; for experience teaches us that in every genus of birds the true typical egg of each species is not without characteristic resemblance.

The foster-parents of the Bronze Cuckoos are generally the *Maluri* and *Acanthiza*, but I have taken them from the nest of

Petroica multicolor (Scarlet-breasted Robin), and they also have been taken from *P. Goodenovii* (Red-Capped Robin) and *Gerygone*.

Rarely two species of Cuckoos deposit eggs in the same nest, but the following is a curious fact:—I found the nest of *Acanthiza* (*Geobasileus*) *chrysorrhæa* containing three eggs, besides an egg each of the two Bronze Cuckoos. We are aware that young Cuckoos have the reputation of ousting their foster brothers and sisters, but if these two lively youngsters had been reared in the same nest we are constrained to imagine that "When Greek met Greek then would come the tug of war."

With reference to parasitic Cuckoos ousting the foster chickens—I do not think this applies in all cases, because if we consider the young Pallid and Fan-tailed Cuckoos, their rapid growth in size as compared with the foster chick, the latter would soon be crushed and starved out of existence; moreover the nest could not contain them all. In any case, there appears an all-wise provision of their Great Creator for the maintenance of their (the Cuckoo) species, for it may be conceived that it occupies the whole time of a pair of tiny foster-parents to satiate the rapacious maw of their large foster-chick without being encumbered with a brood of their own offspring.

386. SCYTHROPS NOVE-HOLLANDI—(Channel-Bill). *Locality*—Australia, except South and West, and New Guinea. *Egg* (taken from the ovary)—Light stone color, marked all over, but particularly at the larger end, with irregular blotches of reddish brown, many of which were of a darker hue, and appeared as if beneath the surface of the shell. Length $1\frac{11}{16}$ inches; breadth $1\frac{1}{4}$ inches.

388. CENTROPUS (*Polophilus*) PHASIANUS—(Pheasant Coucal). *Locality*—North Australia, Queensland, and New South Wales. *Egg*—Nearly round, and of a dirty white, in some instances stained with brown, and with a rather rough surface. Length, 1 inch 4 lines; breadth, 1 inch 2 lines.

The members of this genus are the only Australian Cuckoos which are not parasitic in their habits.

Before leaving the family *Cuculidæ* I shall conclude a few remarks. Some authorities place that family at the close of succeeding (third) Order, but I have retained it at the end of the second Order, because its members display more of the qualities of "Perching Birds" than "Climbers."

I noticed a pair of eggs in the collections of Dr. Lucas, and share with him in the belief that they are the hitherto unknown eggs of the Black-eared Cuckoo (*Mescalins osculans*). They

may be compared in size and color to those of the Shining Fly-catcher (*Myiagra nitida*), being of a somewhat dull white with greyish-brown markings above the upper quarter. Dr. Lucas took one in the nest and accompanying the eggs of the White-shafted Fan-tail (*Rhipidura albiscapa*), some ten miles from Melbourne: the other was taken in a Robin's nest in the North-eastern district.

Dr. Lucas also showed me several eggs of the Fan-tail Cuckoo that were taken this season from *Acanthizas*' nests in Victoria. Lately I have observed an unusual number of Cuckoos flying about Melbourne and the suburbs. That extra numbers, as well as other birds, are driven towards the sea-board may be attributed to the lengthened drought now existing in the Interior and Queensland.

ORDER III—SCANSORES—CLIMBERS.

In the Southern part of Australia, including Tasmania, the incubating months are generally October, November, and December.

Family—CACATUIDÆ.—Cockatoos.

Nests in hollow trees, or crevices of cliffs or rocks. Clutch, two to four eggs. Period of incubation, about three weeks.

391. CACATUA GALERITA—Great Sulphur-crested Cockatoo). *Locality*—Australia, Tasmania, and New Guinea. *Egg*—Pure white, oval, somewhat pointed at the smaller end. Length, 1 inch 7 lines; breadth, 1 inch $2\frac{1}{2}$ lines.

392. CACATUA (*Lophochroa*) LEADBEATERI — (Leadbeater's Cockatoo). *Locality*—New South Wales, Victoria, South and West Australia. ** *Egg*—Pure white, glossy, inclined to oval. Length, 1 inch 6 lines; breadth, 1 inch 1 line.

394. CACATUA (*Eolophus*) ROSEICAPILLA — (Rose-breasted Cockatoo). *Locality*—New South Wales, Victoria, North and South Australia. ** *Egg*—White, oval. Length, 1 inch 5 lines; breadth, 1 inch.

395. LICMETIS TENUIROSTRIS (*nasicus*)—(Long-billed Cockatoo). *Locality*—New South Wales, Victoria, and South Australia. ** *Egg*—White, oval, some specimens rather pointed at each end. Length, 1 inch 5 lines; breadth, 1 inch $\frac{1}{2}$ line.

399. CALYPTORHYNCHUS NASO—(Western Black Cockatoo). *Locality*—West Australia. *Egg*—White. Length, 1 inch 8 lines; breadth, 1 inch 4 lines.

400. CALYPTORHYNCHUS LEACHII (*Solandri*)—Leach's Cockatoo). *Locality*—Australia, except West. ** *Egg*—White, somewhat of a dumpy oval in form, and rounded alike at either end. Length, 1 inch 7 lines; breadth, 1 inch 3 lines.

401. CALYPTORHYNCHUS FUNEREUS—(Funeral Cockatoo). *Locality*—Australia, except North and West. *Egg*—White. Length, 1 inch $7\frac{1}{2}$ lines; breadth, 1 inch $4\frac{1}{2}$ lines.

402. CALYPTORHYNCHUS XANTHONOTUS—(Yellow-eared Black Cockatoo). *Locality*—South Australia (?) and Tasmania. *Egg*—White. Shell of somewhat fine texture. Length, 1 inch 8 lines; breadth, 1 inch 4 lines.

403. CALYPTORHYNCHUS BAUDINII—(Baudin's Cockatoo). *Locality*—West Australia. *Egg*—White. Length, 1 inch 9 lines; breadth, 1 inch $4\frac{1}{2}$ lines.

404. MICROGLOSSUS ATERRIMUM—(Great Palm Black Cockatoo). *Locality*—Cape York and New Guinea. *Egg*—White, pointed at the thin end, rounded at the thicker end. Length, 2 inches; breadth, 1 inch $4\frac{3}{4}$ lines. (Ramsay).

Family—PSITTACIDÆ.—Parrots.

Nests, on the dust and rotten wood in hollow trees, except *Pezoporus* and *Geopsittacus*, which breed on the ground, and *Psephotus pulcherrimus*, of Queensland, which breeds in forsaken ant-hills. Clutch, two to eight eggs. Period of incubation, from eighteen to twenty-one days.

406. POLYTELIS BARRABANDI—(Barraband's Parrakeet). *Locality*—New South Wales and Victoria. ** *Egg*—White, and not so round as Parrakeets' generally are, but more the shape of Cockatoos'. Length, 1 inch $2\frac{1}{4}$ lines; breadth, 11 lines.

409. APROSMICTUS SCAPULATUS (*cyanopygius*)—(King Lory). *Locality*—Queensland, New South Wales, and Victoria. ** *Egg*—Round and white. Length, 1 inch 2 lines; breadth, 1 inch.

I expected to find this egg larger, but it is described from a thoroughly authenticated specimen received from Mr. C. W. De Vis, of the Queensland Museum.

410. PTISTES (*Aprosmictus*) ERYTHROPTERUS—(Red-winged Lory). *Locality*—Queensland. *Egg*—White. Length, 1 inch $1\frac{1}{2}$ lines; breadth, $10\frac{1}{2}$ lines.

415. PLATYCERCUS PENNANTII—(Pennant's Parrakeet). *Locality*—New South Wales, Victoria, and South Australia. *Egg*—White. Length, 1 inch 2 lines; breadth, $11\frac{1}{2}$ lines.

417. *PLATYCERCUS FLAVIVENTRIS*—(Yellow-bellied Parrakeet). *Locality*—Tasmania. *Egg*—Pure white. Length, 1 inch 2 lines; breadth, $11\frac{1}{2}$ lines.

419. *PLATYCERCUS PALLIDICEPS*—(Pale-headed Parrakeet). *Locality*—Queensland and New South Wales. ** *Egg*—Round oval, white. Length, 1 inch $\frac{3}{4}$ line; breadth, $10\frac{3}{4}$ lines.

422. *PLATYCERCUS EXIMIUS*—(Rose-hill Parrakeet). *Locality*—Australia, except North and West, and Tasmania. *Egg*—Beautiful white. Length, 1 inch $1\frac{1}{2}$ lines; breadth, 11 lines.

424. *PLATYCERCUS ICTEROTIS*—(Yellow-cheeked Parrakeet). *Locality*—South (?) and West Australia. *Egg*—White. Length, 11 lines; breadth, $9\frac{1}{2}$ lines.

425. *PURPURECEPHALUS PILEATUS (spurius)*—(Red-capped Parrakeet). *Locality*—West Australia. *Egg*—Milk-white. Length, 1 inch $1\frac{1}{2}$ lines; breadth, $10\frac{1}{2}$ lines.

431. *PSEPHOTUS HÆMATONOTUS*—(Red-rumped Parrakeet). *Locality*—Australia, except North and West. *Egg*—White. Length, 11 lines; breadth, $8\frac{1}{2}$ lines.

The female of this graceful Parrakeet appears solely to perform the task of incubation. I have watched her mate feeding her in or near the nest-hole. He performs the operation, something after the manner of a common pigeon feeding its young, by connecting beaks and discharging at intervals the contents of his crop into her mouth, with spasmodic jerks, while she keeps up a continual or hissing noise.

432. *EUPHEMA CHRYSOSTOMA (venusta)*—(Blue-banded Grass-Parrakeet). *Locality*—New South Wales, Victoria, South Australia, and Tasmania. ** *Egg*—Round, white. Length, 10 lines; breadth, $8\frac{3}{4}$ lines.

433. *EUPHEMA ELEGANS*—(Elegant Grass-Parrakeet). *Locality*—Australia, except North. *Egg*—Pure white. Length, 10 lines; breadth, $8\frac{1}{2}$ lines.

434. *EUPHEMA AURANTIA (chrysogaster)*—(Orange-bellied Grass-Parrakeet). *Locality*—New South Wales, Victoria, South Australia, and Tasmania. ** *Egg*—White; texture of shell very fine. Length, $10\frac{3}{4}$ lines; breadth, 9 lines.

436. *EUPHEMA PULCHELLA*—(Chestnut-shouldered Grass-Parrakeet). *Locality*—Australia, except North and West. ** *Egg*—White. Length, 11 lines; breadth, 9 lines.

438. *EUPHEMA BOURKII*—(Bourke's Grass-Parrakeet). *Locality*—New South Wales, Victoria, and South Australia. *Egg*—Roundish, and similar to the foregoing species. In common with the other members of the same genus, the male assists in the task of incubation.

439. *MELOPSITTACUS UNDULATUS*—(Warbling Grass-Parrakeet). *Locality*—New South Wales, Victoria, South and West Australia. *Egg*—Pure white. Length, $8\frac{1}{2}$ lines; breadth, $6\frac{3}{4}$ lines.

440. *CALOPSITTACUS NOVÆ-HOLLANDIÆ*—(Cockatoo-Parra-keet). *Locality*—Australia. *Egg*—Chalky white. Length, 12 lines; breadth, 9 lines.

443. *LATHAMUS (Nanodes) DISCOLOR*—(Swift Lorikeet). *Locality*—Australia, except North and West, and Tasmania. ** *Egg*—White. Length, $11\frac{1}{2}$ lines; breadth, 10 lines.

444. *TRICHOGLOSSUS MULTICOLOR (Novæ-Hollandiæ)*—(Blue-bellied Lorikeet). *Locality*—Australia and Tasmania. ** *Egg*—Roundish-oval, white. Length, $13\frac{1}{2}$ lines; breadth, $10\frac{1}{2}$ lines.

448. *GLOSSOPSITTA AUSTRALIS (concinna)*—(Musk-Lorikeet). *Locality*—Australia, except West and Tasmania. *Egg*—Dirty white, round in form, and somewhat coarse shell. Length, $11\frac{3}{4}$ lines; breadth, 9 lines. (Gould, $1 \times \frac{7}{8}$ inches.)

450. *GLOSSOPSITTA PUSILLA*—(Little Lorikeet). *Locality*—Australia, except West, and Tasmania. *Egg*—Round-oval, white. Length, $9\frac{1}{4}$ lines; breadth, $7\frac{1}{4}$ lines.

ORDER IV—COLUMBÆ—PIGEONS.

Incubating months, from July to February, but generally in the Spring.

Family—COLUMBIDÆ.—Pigeons and Doves.

Nests—Slight structures of twigs placed on horizontal branches of trees or bushes, except genus *Geophaps*, which breeds on the bare ground.

453. *LAMPROTRERON SUPERBUS*—(Superb Fruit Pigeon). *Locality*—North Australia and New Guinea. *Egg*—White-oval, slightly swollen in the centre. Length, 1 inch $2\frac{1}{2}$ lines; breadth, $10\frac{1}{2}$ lines. (Ramsay).

461. *LEUCOSARCIA PICATA*—(Wonga-Wonga Pigeon). *Locality*—Queensland, New South Wales, and Victoria. ** *Egg*—Pure white, oval, and of the usual glossy appearance. Length, 1 inch 6 lines; breadth, 1 inch 1 line.

462. *PHAPS CHALCOPHTERA*—(Common Bronze-wing). *Locality*—Australia and Tasmania. *Egg*—White. Length, 1 inch $4\frac{1}{2}$ lines; breadth, 1 inch.

I have seen the Bronze-wing breeding in Victoria in July. Sometimes when they possess young they will endeavor to allure

you by fluttering on the ground just out of reach, feigning a broken leg or wing, and continue doing so until they have drawn you a considerable distance from the nest.

463. PHAPS ELEGANS—(Brush Bronze-wing). *Locality*—Australia and Tasmania. *Egg*—White. Length, 1 inch 3 lines; breadth, 11 lines.

465. GEOPHAPS SCRIPTA—(Partridge Bronze-wing). *Locality*—Australia, except North and West. ** *Egg*—Glossy-white, with a faint greenish tinge. Length, 1 inch $2\frac{3}{4}$ lines; breadth, $10\frac{1}{2}$ lines.

466. GEOPHAPS SMITHII—(Smith's Partridge Bronze-wing). *Locality*—North Australia. *Egg*—Greenish white. Length, 1 inch 3 lines; breadth, $10\frac{1}{2}$ lines.

469. OCYPHAPS LOPHOTES—(Crested Bronze-wing). *Locality*—New South Wales, Victoria, North and South Australia. *Egg*—White. Length, 1 inch 4 lines; breadth, 1 inch.

471. ERYTHRAUCHENA HUMERALIS—(Barred-shouldered Dove). *Locality*—North Australia, Queensland, New South Wales, and New Guinea. ** *Egg*—Oval, delicate white. Length, 11 lines; breadth, 8 lines.

472. GEOPELIA TRANQUILLA—(Peaceful Dove). *Locality*—Australia, except West. ** *Egg*—Oval, white. Length, $9\frac{1}{2}$ lines; breadth, 7 lines.

474. STICTOPELIA CUNEATA—(Little Turtle-Dove). *Locality*—New South Wales, Victoria, South and West Australia. *Egg*—White. Length, $8\frac{1}{2}$ lines; breadth, $5\frac{1}{2}$ lines.

ORDER V—GALLINÆ—GALLINACEOUS BIRDS.

Incubating months, September to January.

Family—MEGAPOPIDÆ.—Megapodes, &c.

Nests—Large mounds of earth or sand, leaves, and green herbage are raised to cover the eggs, which are incubated by the action of the sun, together with the heat engendered by the decomposing of vegetable matter. Clutch, eight or more eggs.

476. *TALEGULLUS LATHAMI*—(Wattle Talegullus). *Locality*—Queensland and New South Wales. *Egg*—Perfectly white, long oval form, very thin fragile shell. Length, $3\frac{5}{8}$ inches; breadth, $2\frac{3}{8}$ inches.

477. *LEIPOA OCELLATA*—(Ocellated Leipoa). *Locality*—New South Wales, Victoria, South and West Australia. *Egg*—Light pink, the color being brightest and most uniform when freshly laid. Shell, very thin and brittle. Length, $3\frac{5}{8}$ inches; breadth, $2\frac{3}{8}$ inches.

478. *MEGAPODIUS TUMULUS*—(Australian Megapode). *Locality*—North Australia. *Egg*—Color reddish brown, sometimes dirty yellowish white: the true shell is white, but the coloring is influenced by the composition of the mound in which it is found. Length, $3\frac{1}{4}$ inches; breadth, $2\frac{1}{8}$ inches.

Family—TURNICIDÆ.—Turnices.

Nests slight, constructed of grasses, and placed in hollows on the ground. Clutch, four eggs.

479. *TURNIX MELANOGASTER*—(Black-breasted Turnix). *Locality*—Queensland. *** Egg*—Whitish ground color, finely and thickly speckled all over with light brown, over this is sparingly distributed large heavy well-defined blotches of dark brown and dark indigo or black, a few bluish-grey blotches also appearing as if under the surface of the shell. Length, 1 inch 1 line; breadth, $10\frac{1}{2}$ lines.

480. *TURNIX VARIUS*—(Varied Turnix). *Locality*—Australia and Tasmania. *Egg*—Pale buff, very minutely and thickly spotted and freckled with reddish brown, chestnut, and purplish grey. Length, 1 inch 2 lines; breadth, 11 lines.

483. *TURNIX VELOX*—(Swift-flying Turnix). *Locality*—Australia, except North. *Egg*—Dirty white, very thickly blotched

blotched all over with markings of chestnut: specimens from West Australia are much lighter in color and chestnut blotchings more minute. Length, $11\frac{1}{2}$ lines; breadth, 9 lines.

485. *PEDIONOMUS TORQUATUS* — (Collared Plain-Wanderer).

Locality—New South Wales, Victoria, and South Australia.

* *Egg*—Shape, pyriform. Some, in suddenly contracting towards the smaller end, have a lengthened point or neck, which gives them quite the pear-like shape. Ground color yellowish-white, speckled and blotched all over, particularly at the larger end, with olive, umber, and grey markings, the last color appearing as if under the surface of the shell. When the shells are empty and rubbed against each other, a peculiar sound is produced, like that caused by the grating of fractured pieces of fine china-ware. Average dimensions of a clutch of three. Length, 1 inch 4 lines; breadth, 1 inch.

Family—PERDICIDÆ.—Quails.

Nests constructed of grass and leaves, placed on the ground in thick grass or crops. Clutch, ten, to fourteen, or more eggs.

486. *COTURNIX PECTORALIS* — (Pectoral Quail). *Locality*—Australia and Tasmania. *Egg*—Much variation exists in the coloring, some being largely blotched all over with brown on a straw-white ground, while from this to a finely-spotted marking, every variety occurs. Length, 1 inch 3 lines; breadth, $11\frac{1}{2}$ lines.

487. *SYNOICUS AUSTRALIS* — (Swamp-Quail). *Locality*—Australia and Tasmania. *Egg*—Sometimes uniform bluish white, but more frequently minutely freckled all over with buff. Length, 1 inch $2\frac{1}{2}$ lines; breadth, $11\frac{1}{2}$ lines.

488. *SYNOICUS DIEMENENSIS* — (Tasmanian Swamp-Quail). *Locality*—Victoria and Tasmania. ** *Egg*—More greenish than that of *S. Australis*, and is thickly sprinkled all over with minute spots of brown. Length, 1 inch $3\frac{1}{4}$ lines; breadth, 1 inch 1 line.

490. *SYNOICUS CERVINUS* — (Northern Swamp-Quail). *Locality*—North Australia. *Egg*—Cream-white, without markings of any kind. Length, 1 inch $\frac{3}{4}$ lines; breadth, $10\frac{1}{2}$ lines.

491. *EXCALFATORIA AUSTRALIS* — (Least Swamp-Quail). *Locality*—Australia, except North and West. ** *Egg*—Dirty yellow or straw-colored, completely speckled and marked all over with small gummy shiny-looking spots of brown; character of shell, thick. Length, $11\frac{1}{2}$ lines; breadth, 9 lines.

ORDER VI—STRUTHIONES—OSTRICHES, &c.

Family—STRUTHIONIDÆ.

492. DROMAIUS NOVÆ-HOLLANDIÆ—(Emu). *Locality*—Australia, except West. *Egg*—Beautiful dark green, resembling shagreen in appearance. Length, $5\frac{1}{2}$ inches; breadth, $3\frac{3}{4}$ inches.

Six or seven eggs are placed in a cavity scooped in the ground. The task of incubating them, which occurs in July or August, devolves upon the male.

ORDER VII—GRALLÆ—WADERS, OR STILT-WALKERS.

Incubating months, August to January.

Family—OTIDIDÆ.—Bustards.

495. CHORIOTIS AUSTRALIS—(Australian Bustard). *Locality*—Australia. *Egg*—Olive-color, stained with longitudinal dashes of brown. The clutch of two eggs is usually deposited on the bare ground. Length, $3\frac{1}{8}$ inches; breadth, $2\frac{1}{4}$ inches.

Family—CHARADRIADÆ—Plovers.

Clutch two eggs, deposited on the bare ground.

496. ŒDICNEMUS (*Burhinus*) GRALLARIUS—(Southern Stone-Plover). *Locality*—Australia, except West. *Egg*—Varies considerably in color as well as in form of markings; the usual ground-color is pale buff, thickly blotched all over with umber-brown. Length, 2 inches 3 lines; breadth, 1 inch $7\frac{1}{2}$ lines.

498. HÆMATOPUS LONGIROSTRIS—(White-breasted Oystercatcher). *Locality*—Australia, Tasmania, and New Guinea. *Egg*—Buff stone color, marked all over with irregular blotches of dark chestnut brown, approaching to black. Length, 2 inches 3 lines; breadth, 1 inch $7\frac{1}{2}$ lines.

499. HÆMATOPUS (*Melanibyx*) FULIGINOSUS—(Sooty Oystercatcher). *Locality*—Australia and Tasmania. *Egg*—Similar to *H. longirostris*, of a light stone color, blotched all over with large irregular markings of dark brown, some of which appear as if beneath the surface, and of a purplish hue. Length, 2 inches 8 lines; breadth, 1 inch 9 lines.

500. *LOBIVANEILLUS LOBATUS*—(Wattled Plover). *Locality*—Australia, except North and West, and Tasmania. * * *Egg*—Elegantly shaped, contracted towards the smaller end, ground color of a rich warmish green, boldly splashed and blotched all over with markings of a darker shade and olive. Length, 2 inches; breadth, 1 inch 5 lines.

501. *LOBIVANEILLUS PERSONATUS*—(Masked Plover). *Locality*—North Australia and New Guinea. *Egg*—Dull olive yellow, dashed all over with spots and markings of blackish brown and dark olive brown, particularly at the larger end, in shape somewhat pointed at the smaller end. Length, 1 inch $7\frac{1}{2}$ lines; breadth, 1 inch $2\frac{1}{4}$ lines.

502. *SARCIOPHORUS PECTORALIS*—(Black-breasted Plover). *Locality*—Australia, except North and West, and Tasmania. *Egg*—Ground color light olive grey, very thickly blotched and stained with brown, so as nearly to cover the surface, particularly at the larger end. Length, 1 inch 9 lines; breadth, 1 inch 3 lines.

503. *SQUATAROLA HELVETICA*—(Grey Plover). *Locality*—Australia and Tasmania. *Egg*—Greyish or yellowish stone color, blotched and clouded boldly on the larger half, and chiefly round the end, with irregular-edged blotches of blackish sepia, running mostly in a longitudinal direction; the markings are smaller near the minor end, and beneath the dark coloring are sinears and traces of bluish grey. In shape some eggs are rather pointed, and others slightly rounded at the small end. Average length, 2 inches $\frac{3}{4}$ line; breadth, 1 inch 5 lines. (Legge).

Until about three years ago the breeding haunts of the Grey Plover remained undiscovered. In a letter from Mr. Ernest Gibson, of Buenos Ayres (who, by the way, is performing work of lasting interest in working up notes of the birds of his adopted country), informs me that an intimate friend of his—Mr. Harvie-Brown, together with Mr. Seebohm, were the first to take eggs of the Grey Plover on the shores of the Arctic Ocean at the mouth of the Petchora River.

505. *EUDROMAIS AUSTRALIS*—(Australian Dottrel). *Locality*—New South Wales, Victoria, and South Australia. *Egg*—In form rather less pointed than the usual pyriform shape of Plovers' eggs; the ground color is of a deep rich cream or buff, sparingly sprinkled all over with irregular spots and some elongated crooked markings of chocolate black, with a few minute dots and dashes of a lighter kind; the markings look black in certain lights, but of a chocolate tint in others. Length, 1 inch $5\frac{1}{2}$ lines; breadth, 1 inch. (Ramsay).

507. *ÆGIALITES HIATICULA*—(Ring Dottrel). *Locality*—New South Wales (occasional) and New Guinea. * *Egg*—(From Europe)—Somewhat pyriform, apex very round and smaller end sharply contracted; ground color dirty white or stone grey, spotted and blotched with round markings of dark

brown, black, and dull grey, the last appearing as if under the shell's surface; the markings are rather sparingly distributed, but thicken towards the apex. Length, 1 inch 4 lines; breadth, 1 inch.

508. *ÆGIALITES MONACHA*—(Hooded Dottrel). *Locality*—Australia, except North and Tasmania. *Egg*—Pale stone color, sprinkled all over with numerous small irregularly-shaped marks of brownish black. Length, 1 inch $4\frac{1}{2}$ lines; breadth, 1 inch $\frac{1}{2}$ line.

509. *ÆGIALITES NIGRIFRONS*—(Black-fronted Dottrel). *Locality*—Australia, except North and West. *Egg*—In form resembles the eggs of other Dottrels, being considerably pointed at the smaller end, of a pale stone or dirty yellowish buff color, very numerous but minutely speckled with dark brown. Length, 1 inch 2 lines; breadth, 10 lines.

510. *ÆGIALOPHILUS RUFICAPILLUS*—(Red-capped Dottrel). *Locality*—Australia, Tasmania, and New Guinea. *Egg*—Pale stone color, sprinkled all over with irregular blotches of brownish black. Length, 1 inch 3 lines; breadth, 11 lines.

513. *ERYTHROGONYS CINCTUS*—(Red-kneed Dottrel). *Locality*—Australia, except West. * *Egg*—Ground color yellowish white, which is nearly obscured by the numerous streaks, blotches, and patches of very dark olive brown, approaching black, which are marbled promiscuously over the whole of the surface. Length, 1 inch 2 lines; breadth, $10\frac{1}{2}$ lines.

514. *ACTITURUS (Bartramia) BARTRAMIUS*—(Bartram's Sandpiper). *Locality*—New South Wales (accidental). * *Egg*—(From Europe)—Not unlike in color and markings that of the Common Sandpiper (*Actitis*), but of course proportionally larger, also being pyriform, but more obtuse at the smaller end; ground color warm stone grey with a pinkish tinge, sprinkled all over, but more particularly on the apex, with spots and small blotches of brown and reddish brown, and some obscured markings appear as if under the surface of the shell. Length, 1 inch 9 lines; breadth, 1 inch 3 lines.

Family—GLAREOLIDÆ.—Pratincoles.

Clutch, three or four eggs deposited on the bare ground.

515. *GLAREOLA GRALLARIA*—(Australian Pratincole). *Locality*—North Australia and New South Wales. * *Egg*—At first sight not unlike that of *Ægialites nigrifrons* (Black-fronted Dottrel), with the exception of being proportionally larger and not so pyriform in shape; ground color of a yellowish buffy-stone, lightly speckled and streaked all over with a light shade of umber and faint greyish markings. Length, 1 inch 3 lines; breadth, 11 lines. This rare inland bird's egg was taken in the Darling District, and kindly lent by Mr. H. H. Peck.

516. *GLAREOLA ORIENTALIS*—(Oriental Pratincole). *Locality*—North Australia (occasional). * *Egg*—Assimilates in shape to that of the foregoing, inclined to oval, and a little swollen about the bilge. Ground color where visible yellowish buff, thickly marbled and blotched all over with olive, form a light shade to almost black, and intermingled with a few greyish markings. Length, 1 inch 3 lines; breadth, $1\frac{1}{2}$ lines.

Family—HIMANTOPODIDÆ.—Stilts.

Clutch, four eggs, generally deposited about the margin of swamps.

517. *HIMANTOPUS LEUCOCEPHALUS*—(White-headed Stilt). *Locality*—Australia and Tasmania. *Egg*—Pyriform, pale yellow brown, spotted and blotched with umber and black, the black spots running together and forming large patches on the thick end. Length, 1 inch 6 lines; breadth, 1 inch $1\frac{1}{2}$ lines. (Ramsay).

518. *CLADORHYNCHUS PECTORALIS*—(Banded Stilt). *Locality*—New South Wales, Victoria, South and West Australia, and Tasmania. * *Egg*—Yellowish olive ground color, heavily blotched and spotted, especially on the apex, with dark brown and black. Length, 1 inch 9 lines; breadth, 1 inch 3 lines.

Family—RECURVIROSTRIDÆ.—Avocets.

Clutch, four eggs, deposited on the bare ground, near the margin of swamps or standing water.

519. *RECURVIROSTRA RUBRICOLLIS*—(Red-necked Avocet). *Locality*—Australia and Tasmania. *Egg*—The ground color varies from light stone color to creamy yellow, some of the former tints have a faint olive green shade, some are heavily blotched towards the thicker end, others sparingly covered with spots, dots, and freckles of dark umber brown and black, with a few absolute spots of slate grey. Length, 1 inch $4\frac{3}{4}$ lines; breadth, nearly 1 inch. (Ramsay).

Family—TRINGIDÆ.—Sandpipers, &c.

Clutch, two to four eggs, deposited on the bare ground or sand. Some species construct slight nests amongst herbage.

523. *ANCYLOCHILUS SUBARQUATUS*—(Curlew Sandpiper). *Locality*—Australia, Tasmania, and New Guinea. ** *Egg*—Somewhat pyriform in shape; ground color of a dull yellowish olive or buff stone, fairly marked all over with round well defined spots of umber of different shades varying from very light to very dark. Length, 1 inch $2\frac{1}{2}$ lines; breadth, 11 lines.

527. *TEREKIA CINEREA*—(Terek Sandpiper). *Locality*—Queensland and New South Wales. * *Egg*—Pear-shaped;

ground color of a stony grey with a perceptible greenish tinge, blotched, spotted, and streaked all over with rich umber or reddish brown, some lighter markings appearing under the surface of the shell. The egg is not unlike that of the Marsh Sandpiper, only the markings are more numerous and smaller. Length, 1 inch $5\frac{3}{4}$ lines; breadth, $12\frac{1}{2}$ lines.

528. *ACTITIS HYPOLEUCOS*—(Common Sandpiper). *Locality*—Australia and New Guinea. **Egg*—Ground color warm stony grey or creamy color, sparingly marked, but closer about the apex, with roundish spots and blotches of umber, reddish brown, and obscure grey, the last color appearing under the surface of the shell. Length, 1 inch $5\frac{1}{4}$ lines; breadth, $12\frac{1}{2}$ lines.

529. *GLOTTIS GLOTTOIDES*—(Greenshank). *Locality*—Australia. **Egg*—Pear-shaped, apex rounded, the smaller end nipping sharply off. Rich buff stone color, mediumly daubed and blotched with rich umber and reddish brown; the usual number of purplish grey markings appear under the shell's surface. In other specimens the ground color has a faint greenish tinge, with the markings less numerous and more speckled in form. Length, 2 inches; breadth, 1 inch 4 lines.

530. *TOTANUS STAGNATILIS*—(Marsh Sandpiper). *Locality*—Queensland, New South Wales, and New Guinea. **Egg*—Pear-shaped, of a rich buffy stone color, mediumly daubed and blotched all over with rich umber or reddish brown and dull grey; the last color appears under the shell's surface. Length, 1 inch 6 lines; breadth, $12\frac{1}{2}$ lines.

532. *STREPSILAS INTERPRES*—(Turnstone). *Locality*—Australia, Tasmania, and New Guinea. **Egg*—Large for the size of the bird, pear-shaped. Ground color of a pale olive or warmish green, daubed and smudged with large and small patches of umber; the larger markings are about the thicker end, where some have the appearance of having been wiped on obliquely with a brush. Altogether this interesting egg presents a singular appearance. Length, 1 inch 7 lines; breadth, 1 inch $1\frac{1}{2}$ lines.

Family—SCOLOPACIDÆ.—Snipe.

Clutch, four eggs, deposited in a slight hollow on the ground, under tufts of grass or in other herbage.

533. *GALLINAGO AUSTRALIS*—(New Holland Snipe). *Locality*—Australia and Tasmania. **Egg*—This very interesting species, in shape and ground color, is not unlike a miniature Oyster-catcher's, only more heavily blotched. Ground color is of a light yellowish buff or stone, heavily marked all over with large well-defined patches of very dark olive, approaching Chinese ink color; these patches, some of which cover the area of half a three-penny bit, assume fanciful figures, and are

conjoined with other smaller and streaky markings. Where the ground color is visible, a few light greyish markings appear as if under the shell's surface. Length, 1 inch $4\frac{1}{2}$ lines; breadth, 1 inch 1 line.

The following is a letter of mine that appeared in *The Australasian*, 6th Oct., 1883, which may be of interest to my readers:—

“An excellent and most interesting article, by ‘Groundbait,’ appeared in your columns on the 8th ult. But some portions of it were misleading, and behind the ornithological and oological knowledge of the present day as regards the Australian Snipe (*Gallinago Australis*).

“In reference to the migration. It has been proved beyond all doubt that Snipe migrate from the interior of the continent and arrive simultaneously in Tasmania and Southern parts of Australia by night about the period of the full moon nearest the end of August or beginning of September. In January they return northward by degrees, in time for the wet season in the interior, and for the purpose of breeding there. Therefore, the conclusions put forward by ‘Groundbait’ cannot be entertained, viz.:—That ‘the Snipe make their way to the Indian Archipelago, or to India itself, where Snipe are numerous,’ but not of the same species, or that “they go south to some cold lands far south of Tasmania.

“It has been proved that Snipe incubate or breed in the interior during the wet season, about April or May. I saw a clutch of three eggs which were taken in the Darling district, near Bourke. I am in possession of one of these eggs, which I exhibited at the annual conversazione of the Field Naturalists’ Club, in April, 1882, and which I subsequently described.”

(Here follows the description of egg as given above).

“The nest of these remarkable eggs was simply the bare earth, slightly hollowed, under tufts of grass. I also saw another clutch of similar eggs in the Australian Museum, Sydney, which was afterwards described by the curator, Mr. E. P. Ramsay, before the Linnean Society of New South Wales, in January, 1882. Travellers between the Upper Darling and the Cooper have informed me that they have observed young Snipe running and hiding in the grass. ‘Groundbait’ says:—‘Neither Burke nor Wills, nor, as far as I can learn, any other explorer has mentioned his meeting with Snipe in either the interior of this continent or on its northern shores.’ Captain Stuart informs us that he met with a few in the interior, but with great numbers breeding in the valley of Mypunga, South Australia, and Gilbert, the able coadjutor of the celebrated naturalist Gould, mentions having met with the birds in the country about Port Darwin.”

Family—TANTALIDÆ.—Ibises and Spoonbills.

Nests slightly constructed of coarse sticks and other material, placed in overhanging branches of trees, or on the ground in reed-beds bordering swamps and rivers. Clutch, four to nine eggs.

539. THRESKIORNIS STRICTIPENNIS—(White Ibis). *Locality*—Australia, except West. ***Egg*—Similar to the better-known Spoonbill's; long, oval in form, white; surface of shell somewhat rough, being minutely pitted all over, also sometimes stained by dirt of the nest. Length, $2\frac{5}{8}$ inches; breadth, $1\frac{1}{16}$ inches.

White Ibises breed in the reed-beds in the neighborhood of the Murray, in November, laying sometimes nine eggs.

540. *FALCINELLUS IGNEUS*—(Glossy Ibis). *Locality*—Australia, except West. * *Egg*—Surface slightly rough, of a uniform cold bluish green. Length, 2 inches $1\frac{1}{4}$ lines; breadth, 1 inch 5 lines.

542. *PLATIBIS FLAVIPES*—(Yellow-legged Spoonbill). *Locality*—Australia, except North West. * *Egg*—White, long, tapering towards the smaller end; surface of shell rough and minutely indented all over. Length, $2\frac{1}{8}$ inches; breadth, $1\frac{1}{8}$ inches.

Family—GRUIDÆ.—Cranes.

543. *GRUS AUSTRALASIANUS*—(Australian Crane). *Locality*—Australia, except West. *Egg*—Cream color, blotched all over, particularly at the larger end, with chestnut and purplish brown, the latter color appearing as if beneath the surface of the shell. Clutch, two eggs, deposited on the bare ground on plains. Length, $3\frac{3}{4}$ inches; breadth, $2\frac{1}{2}$ inches.

At times, these birds fight desperately to defend their eggs against intruders, and woe-betide the person that comes in contact with their sharp bills.

Family—ARDEIDÆ.—Hérons.

Nests composed of sticks, generally placed in trees, others on shelving rocks or on the ground. Clutch, four eggs.

545. *ARDEA CINEREA*—(Common Heron). *Locality*—New South Wales and South Australia. * *Egg*—Of a uniform light green; surface minutely spotted or otherwise marked with line. Length, $2\frac{1}{2}$ inches; breadth, $1\frac{3}{4}$ inches.

547. *ARDEA PACIFICA*—(Pacific Heron). *Locality*—Australia. * *Egg*—Oval, surface a little rough, of a light bluish green. Length, 2 inches $2\frac{1}{2}$ lines; breadth, 1 inch 6 lines.

548. *ARDEA (Demigretta) NOVÆ-HOLLANDIÆ*—(White-fronted Heron) *Locality*—Australia, and Tasmania. *Egg*—Pale bluish green. Length, 1 inch $10\frac{1}{2}$ lines; breadth, 1 inch $3\frac{1}{2}$ lines. This common Heron is a persistent breeder. I heard of five clutches of five eggs each having been taken from one nest, and, notwithstanding, the bird succeeded in rearing a brood before the season expired.

549. *HERODIAS ALBA*—(Australian Egret). *Locality*—Australia and Tasmania. ** *Egg*—Long, oval, light bluish green. Length, 2 inches 1 line; breadth, 1 inch 5 lines.

550. *HERODIAS EGETTOIDES (intermedia)*—(Plumed Egret). *Locality*—Australia, except West and New Guinea. *Egg*—Regular oval, texture smooth, color pale sea green. Average length, 1 inch 11 lines; breadth, 1 inch 4 lines. (Legge).

552. *HERODIAS GARZETTA*—(Little Egret). *Locality*—Queensland. * * *Egg*—Very light greenish tinge or bluish white. Length, 1 inch 8 lines; breadth, 1 inch 3 lines.

555. *DEMIEGRETТА JUGULARIS (sacra)*—(Blue Reef Heron). *Locality*—North Australia. *Egg*—Pale bluish white. Length, 1 inch $10\frac{1}{2}$ lines; breadth, 1 inch 3 lines.

557. *NYCTICORAX (Nyctiaradea) CALEDONICUS*—(Nankeen Night Heron). *Locality*—Australia, Tasmania, and New Guinea. *Egg*—Pale green. The longer dimension of Mr. Gould's is at variance by over half-an-inch with Mr. Ramsay's. The measurement of a pair of these eggs in my collection nearly corresponds o Mr. Gould's, which is no doubt that of the typical egg, viz., $2\frac{5}{8}$ by $1\frac{1}{2}$ inches.

558. *BOTAURUS POICILOPTILUS*—(Australian Bittern). *Locality*—Australia, except West and Tasmania. * *Egg*—Rather corpulent and smaller end nipping sharply off, of a uniform light dull olive color; on examining the surface of the shell numerous pin-point-like indents will be observed as if struck longitudinally. Length, 2 inches; breadth, $1\frac{1}{2}$ inches.

559. *BUTOROIDES FLAVICOLLIS*—(Yellow-necked Mangrove Bittern). *Locality*—Australia, except Victoria and New Guinea. *Egg*—Of a much paler bluish green, and more rounded form, than those of any other species of the group. Length, 1 inch 6 lines; breadth, 1 inch $1\frac{1}{2}$ lines.

This description is Gould's. But I have received an authenticated egg of this species from Queensland, which is white of a bluish milky tinge. Length, 1 inch 10 lines; breadth, 1 inch 4 lines.

560. *BUTOROIDES MACRORHYNCHA*—(Thick-billed Mangrove Bittern). *Locality*—Queensland and New South Wales. *Egg*—Pale bluish green. Length, 1 inch $8\frac{1}{2}$ lines; breadth, 1 inch $2\frac{1}{4}$ lines. (Ramsay).

561. *BUTOROIDES JANANICA*—(Little Mangrove Bittern). *Locality*—North Australia, Queensland, and New South Wales. *Egg*—Elongated oval, pointed at both ends, color very pale green. Length, 1 inch $7\frac{1}{2}$ lines; breadth, 1 inch 3 lines.

Family—RALLIDÆ.—Rails, &c.

Nests open, constructed of grasses, reeds, or other aquatic vegetables, placed amongst rushes or herbage in creeks and swamps, or on the banks. Clutch, four to ten eggs.

563. *PORPHYRIO MELANOTUS*—(Black-backed Porphyrio). *Locality*—Australia, except West and Tasmania. * *Egg*—Ground color light brownish buff, but sometimes of a sage green tinge, mediumly marked with irregular-sized spots and blotches of reddish brown or sienna and greyish purple, also minutely freckled with the same colors. The surface of some

shells is somewhat lustrous, that of others is not. Size varies considerably, average about 2 inches by $1\frac{1}{2}$ inches.

565. *TRIBONYX MORTIERII*—(Mortier's Tribonyx). *Locality*—Tasmania. *Egg*—Stone color, marked all over with thinly-dispersed, irregular-shaped, and variously-sized spots and blotches of dark chestnut brown, also very minutely freckled with the same color. Length, $2\frac{1}{4}$ inches; breadth, $1\frac{1}{2}$ inches.

566. *TRIBONYX VENTRALIS*—(Black-tailed Tribonyx). *Locality*—Australia. *Egg*—Greenish ground color, very minutely freckled all over with reddish brown specks, with a few large blotches here and there over the shell. Length, 1 inch $8\frac{1}{2}$ lines; breadth, 1 inch $2\frac{1}{2}$ lines.

This description is from thoroughly authenticated specimens. I believe the late Mr. Gould has described for this species some other egg (probably the following). Nevertheless, considering his limited sojourn on our continent, it is surprising what a quantity of information he amassed, and what few errors have crept into it. Speaking for the whole of his oological memoranda only two or three exceptions can be taken.

567. *GALLINULA TENEBROSA*—(Sombre Gallinule). *Locality*—Australia, except West. *Egg*—More resembles that of the Coot (*Fulica*) in shape, color, and character of markings than any other of the family. Ground color dull white, with a very faint greenish tinge mediumly marked with round spots of pinkish red and purple, also very minutely speckled all over with the same colors. Length, 1 inch 10 lines; breadth, 1 inch 4 lines.

These eggs above described were taken in Bancroft's Bay, Gippsland Lakes, where I have seen and shot the birds. Typical eggs of true *Gallinulæ* are always beautifully proportioned oblongs, not "rounded and swollen in form," as Mr. Ramsay described the Sombre Gallinule's; moreover, his dimensions (1.55 x 1.2 inches) are less than those of the British Gallinule's egg, although the Australian representative is a much larger bird.

568. *FULICA AUSTRALIS*—(Australian Coot). *Locality*—Australia and Tasmania. *Egg*—Large for the size of the bird; dull white, ground color marked all over with freckles and small roundish spots of dark purplish brown. Length, 2 inches 1 line; breadth, 1 inch 5 lines.

569. *PARRA (Hydralector) GALLINACEA (cristata)*—(Combcrested Parra). *Locality*—North Australia, Queensland, and New South Wales. *Egg*—Ground color dark, shiny, raw sienna-tint, over which is traced in various directions a series of broad and fine hair-like contorted lines of brownish black, which, by occasionally uniting laterally and crossing each other, form here and there large blotches. Although the markings are of the same character on each egg, they are somewhat differently distributed; thus on one specimen they are more numerous at

the larger end and absent at the smaller, while in another they are more abundant at the smaller and less at the larger extremity. The egg is, moreover, rendered remarkably conspicuous by the singular pointed form of the smaller end, and by their small size as compared with that of the bird, but, above all, by the form and disposition of the markings, which are as if traced by the hand of a person who had amused himself by attempting to cover the surface with fantastic streaks, blotches, and contorted curves from end to end. Length, 1 inch $1\frac{1}{2}$ lines; breadth, $10\frac{1}{2}$ lines.

570. *HYPOTENIDIA PHILLIPENSIS*—(Pectoral Rail). *Locality*—Australia and Tasmania. *Egg*—Cream color, with numerous large irregular blotches of dark chestnut red at the larger end, and a few smaller ones distributed over the remainder of the surface. Length, 1 inch $5\frac{1}{2}$ lines; breadth, 1 inch $1\frac{1}{2}$ lines.

371. *RALLUS (Lewinia) BRACHIPUS*—(Lewin's Water-Rail). *Locality*—Australia, except North and Tasmania. *Egg*—Pale olive color, blotched all over, but particularly at the larger end, with reddish and dark brown. Length, 1 inch 3 lines; breadth, $10\frac{1}{2}$ lines.

572. *EULABEORNIS CASTANEIVENTRIS*—(Chestnut-bellied Rail). *Locality*—North Australia and New Guinea. *Egg*—Rather lengthened in form, of a pale pinkish white, dotted all over with reddish chestnut, the spots being thinly dispersed, and some of them appearing as if beneath the surface of the shell, giving them a darker tint. Length, 2 inches $1\frac{1}{2}$ lines; breadth, 1 inch $7\frac{1}{2}$ lines.

574. *PORZANA PALUSTRIS*—(Little Water-Crake). *Locality*—Australia, except North and Tasmania. *Egg*—Nearly uniform brownish olive. Length, $12\frac{1}{2}$ lines; breadth, $9\frac{1}{4}$ lines.

575. *PORZANA (Zapornia) TABUENSIS*—(Tabuan Water-Crake). *Locality*—Australia and Tasmania. ** *Egg*—In shape obtuse, ground color dirty white, streaked and mottled all over with very light brown and light chestnut. Length, 1 inch 2 lines; breadth, 11 lines.

ORDER VIII—NATATOIRES.—SWIMMERS.

Incubating months, August to December, which also apply to sea-birds on that part of the Continent and Islands washed by the Southern Ocean, but in the Tropical seas the months are generally April, May, and June.

Family—ANATIDÆ.—Geese, Ducks, &c.

Nests warm, downy, placed in sedgy herbage, holes of trees, or in old deserted nests of Magpies, Herons, &c. Clutch, two to twelve eggs.

577. CHENOPIS ATRATA — (Black Swan). *Locality*—Australia and Tasmania. *Egg*—Pale green, stained all over with buffy brown. Length, $4\frac{1}{4}$ inches; breadth, $2\frac{3}{4}$ inches.

578. CEREOPSIS NOVÆ-HOLLANDIÆ—(Cereopsis Goose). *Locality*—New South Wales, Victoria, South Australia, and Tasmania. *Egg*—Smooth, creamy white. In shape both ends nearly alike, with a good bilge; shell a little limey. Length, $3\frac{1}{4}$ inches; breadth, $2\frac{1}{4}$ inches.

579. ANSERANAS MELANOLEUCA—(Semipalmated Goose). *Locality*—Australia, except West. ** *Egg*—Brownish white. Length, $3\frac{3}{16}$ inches (long), $2\frac{1}{16}$ inches (round); breadth, $2\frac{2}{16}$ inches (long), $2\frac{5}{16}$ inches (round).

580. CHLAMYDOCHEN JUBATA—(Maned Goose). *Locality*—Australia and Tasmania. ** *Egg*—Light creamy white. Length, $2\frac{5}{15}$ inches; breadth, $1\frac{5}{8}$ inches.

581. NETTAPUS (*Anseneua*) PULCHELLUS—(Green Pygmy Goose). *Locality*—North Australia and New Guinea. *Egg*—White. Length, 1 inch $10\frac{1}{2}$ lines; breadth, 1 inch $4\frac{1}{2}$ lines.

582. NETTAPUS (*Anseneua*) ALBIPENNIS—(White-quilled Pygmy Goose). *Locality*—Queensland and New South Wales. ** *Egg*—Whitish color. Length, 1 inch $11\frac{1}{2}$ lines; breadth, 1 inch $4\frac{1}{2}$ lines.

584. CASARCA TADORNOIDES—(Chestnut-colored Sheldrake). *Locality*—New South Wales, Victoria, South and West Australia, and Tasmania. * *Egg*—Very smooth to the touch, and light creamy white; the dimensions of two eggs from a clutch of five taken from a hollow spout of a tree in a forest near Ballan are—Length, $2\frac{3}{4}$ inches; breadth, nearly 2 inches.

585. ANAS SUPERCILIOSA—(Australian Wild Duck). *Locality*—Australia and Tasmania. *Egg*—Smooth, white, with a faint grassy tinge. Length, 2 inches 4 lines; breadth, 1 inch $7\frac{1}{2}$ lines.

586. *ANAS (Mareca) PUNCTATA*—(Australian Teal). *Locality*—Australia, Tasmania, and New Guinea. *** Egg*—Oval, smooth, and of a rich cream or light stone color. Length, 2 inches; breadth, 1 inch 5 lines.

Although the Teal may be considered a common bird, it is rarely that males in full nuptial plumage are obtained. I had the good fortune to secure an egg last season from a clutch from which a Teal, in full nuptial livery, was flushed. The dimensions of the egg were, $\frac{1}{2}$ a line over 2 inches by $1\frac{1}{2}$ inches. Some sportsmen and bushmen erroneously call these beautiful plumaged birds Mountain Teal, supposing them to be a variety of the Common Teal. Now, scientific egg-collectors collect and preserve the down from all Ducks' nests. If the down of the so-called Mountain Teal's nest were examined with that of the common Teal's nest, I have no doubt both would be proved to be identical.

587. *STICTONETTA NEVOSA*—(Freckled Duck). *Locality*—Victoria, South and West Australia. ** Egg*—Lougish in shape, slightly swollen about the upper quarter, and both ends nearly alike; surface smooth or greasy; color of a greenish white tinge. Length, 2 inches $6\frac{1}{2}$ lines; breadth, 1 inch 8 lines.

588. *SPARTULA RHYNCHOTIS*—(Australian Shoveller). *Locality*—Australia, except North, and Tasmania. ** Egg*—Smooth, of a light creamy white, with a very faint greenish tinge. In October, 1880, on Phillip Island, Western Port, I flushed a Shoveller from its nest in some tussocky grass, away from, although in, the immediate neighborhood of swamps. The nest contained nine eggs, which appeared to be the complement, as they were half-hatched; I only took two, which measured—Length, 2 inches $1\frac{1}{2}$ lines; breadth, 1 inch 6 lines.

589. *SPARTULA CLYPEATA*—(European Shoveller). *Locality*—New South Wales (accidental). ** Egg* (from Europe)—Light creamy white. Length, 2 inches; breadth, 1 inch $5\frac{1}{2}$ lines.

590. *MALACORHYNCHUS MEMBRANACEUS*—(Pink-eye-browed Duck). *Locality*—Australia and Tasmania. *Egg*—A rather pointed oval of a rich light cream color. Length, 1 inch 10 lines; breadth, 1 inch $3\frac{1}{2}$ lines. (Ramsay).

Mr. Ramsay described a beautiful nest of this Duck taken from a deserted White-fronted Heron's nest. He says:—"The structure consisted of a platform of sticks, which formed the nest of the Heron, being thickly covered with dark stately grey down, which formed a rim four inches in height, a large quantity of down was worked in among the sticks and covered the greater part of the sides; it closed over the eggs above in an elastic mass, quite hiding them." I have heard of other Ducks similarly selecting old Crows' or Magpies' nests. Some of the members of this genus are certainly very unique in their habits—for instance, the Wild Duck: if the first part of a clutch be laid and meddled with by a stranger, the bird will indignantly break the eggs, and throw them out of the nest. Here is a "nut to

crack " for some of the good folk who look upon oologists as a parcel of cruel beings, and say that it hurts a bird to rob it of its eggs. Take the case of the Wild Duck: how little it cares for its own eggs, if it scatters them out of the nest like so many live coals upon being simply touched by any person.

591. *DENDROCYGNA GOULDI* (*vagans*)—(Whistling Tree-Duck). *Locality*—North Australia, Queensland, New South Wales, and New Guinea. *Egg*—Creamy white. Length, 1 inch $10\frac{1}{2}$ lines; breadth, 1 inch 6 lines.

593. *NYROCA AUSTRALIS*—(White-eyed Duck). *Locality*—Australia and Tasmania. * *Egg*—Apex rather pointed and both ends almost alike; smooth and cream-colored. Length, nearly $2\frac{7}{16}$ inches; breadth, nearly $1\frac{1}{5}$ inches.

594. *ERISMATURA AUSTRALIS*—(Blue-billed Duck). *Locality*—Victoria, South and West Australia. *Egg*—Uniform bluish white, with a very rough surface. Length, $2\frac{5}{8}$ inches; breadth, 2 inches.

595. *BIZIURA LOBATA*—(Musk Duck). *Locality*—New South Wales, Victoria, South and West Australia, and Tasmania. *Egg*—Large for the size of the bird, unlike other ducks eggs, being coarsely grained, and of a uniform pale olive. Length, $3\frac{1}{4}$ inches; breadth, $2\frac{1}{8}$ inches.



Family—LARIDÆ.—Gulls, Terns, &c.

The members of this family generally breed in flocks on shingly sea-shores, headlands or islands. One to three eggs are placed on the bare sand or ledges of rock. Some species construct nests of sea-weed, placed on shrubs or trees.

596. LARUS (*Gabianus*) PACIFICUS—(Pacific Gull). *Locality*—Australia, except North and Tasmania. *Egg*—Clear olive, marked all over with blotches of blackish and umber brown, some of the markings appearing as if beneath the surface of the shell. Length, 3 inches; breadth, $2\frac{1}{8}$ inches.

597. BRUCHIGAVIA (*Gelastes*) JAMESONII (*Novce-Hollandice*)—(Silver Gull). *Locality*—Australia, except North and West, and Tasmania. *Egg*—Ground color, varying from pale greenish to dark brownish olive; in some instances slightly, in others largely, blotched and streaked with blackish brown; they also vary in shape, some being shorter and thicker than others. Average length, $2\frac{1}{8}$ inches; breadth, $1\frac{1}{2}$ inches.

599. STERCORARIUS (*Megalestris*) CATARRHACTES—(Great Skua). *Locality*—Australia, except North and Tasmania. * *Egg*—One taken on Campbell's Island, south of New Zealand, has a somewhat rough shell, ground color, light olive, irregularly blotched, with a few markings of olive, a greater number of larger markings, of various shades of grey and brownish purple, appearing as if under the surface of the shell. Length, $2\frac{7}{8}$ inches; breadth, 2 inches. Another, taken from the Northern Hemisphere, has the ground color of a much darker shade of olive, and the markings more inclined to reddish olive. Length, $2\frac{3}{8}$ inches; breadth, $1\frac{7}{8}$ inches. The difference in the sizes of the eggs may be accounted for by the following remarks by Mr. Gould:—"I may mention that all specimens (of the above bird) from the Southern Hemisphere are rather darker in color, and somewhat larger in size, than those from the Northern."

While on the topic of Skuas, it is with pleasure I embrace this opportunity of placing on record an addition to the avifauna of Australia, viz.:—Richardson's Skua—*Lestris richardsoni* (*parasiticus*). When steaming up Port Phillip Bay last October, I observed numbers of these birds hovering over our wake near the vessel.

The following is extracted from the "Catalogue of the Birds of New Zealand," by Mr. F. W. Hutton, which appears to tally with the description of the new bird under notice:—"No. 107. *Lestris parasiticus*; Temm—Skua Gull. Back and wing coverts, brownish cinereous; top of the head, brown, varied with white; neck and breast, white; abdomen, dusky; quills and tail, black; two long narrow plumes from the tale (immature). L., 15.5; W., 11.2;

B., 1.8 ; T., 1.65. Although only in immature plumage, I have very little hesitation in referring the bird to *L. parasiticus*, no doubt identical with *L. spinicauda* Bp., which is not uncommon at the Cape of Good Hope."

600. SYLOCHELIDON (*Thalasseus*) CASPIA—(Caspian Tern). *Locality*—Australia, except West and Tasmania. *Egg*—Stone-grey color, marked all over with large and small blotches of umber-brown, a great portion of which appears as if beneath the surface of the shell. Length, $2\frac{5}{8}$ inches ; breadth, $1\frac{3}{4}$ inches.

601. THALASSEUS CRISTATUS—(Torres' Straits Tern). *Locality*—North Australia and New Guinea. *Egg*—Ground-color ; is generally stone-grey, in some instances thickly speckled and blotched with black ; others are marked with irregular waved streaks and minute spots of dark brown ; others again with scattered irregular streaks and spots of black ; some are thickly blotched, especially at the larger end, with reddish, and others are finely blotched and streaked with dark-red, on a light pinkish grey ground. Average length, $2\frac{3}{8}$ inches ; breadth, $1\frac{5}{8}$ inches.

602. THALASSEUS POLIOCERCUS (*Novce-Hollandice*) — (Bass's Straits Tern). *Locality*—Australia, except North and Tasmania. *Egg*—Varies considerably in color, some being of a stone-grey, others of a buffy hue, all more or less marked with brown, the markings in some being large and irregular blotches, in others streaks and spots, in others in the form of Chinese or Hindustanee characters ; others again are freckled and blotched all over with brown ; and some have the markings so thick at the larger end that they blend into each and form a broad zone. Length, $2\frac{2}{3}$ inches ; breadth, $1\frac{1}{2}$ inches.

Some ornithologists believe that this and the foregoing species are identical. However, their manners of nidification are different. The former breeds in the tropical seas in May and June, and the latter in the colder regions of Tasmania and Southern Australia in November and December.

603. THALASSEUS BENGALENSIS (*media*)—(Indian Tern). *Locality*—North Australia **Egg*—Of a soft pinky-white tinge, moderately spotted and freckled all over with markings of pinkish or reddish brown, softened at the edges into a paler tint, also greyish spots appearing under the shell's surface. Length, 2 inches ; breadth, $1\frac{6}{10}$ to $1\frac{1}{2}$ inches.

604. STERNA MELANORHYNCHA (*frontalis*)—(Southern Tern). *Locality*—Australia, except West and Tasmania. *Egg*—Ground-color olive-brown, blotched and marked all over, but particularly at the larger end, with rich umber intermingled with obscure markings of grey, the latter appearing as if beneath the surface of the shell. Length, 1 inch 10 lines ; breadth, 1 inch $4\frac{1}{2}$ lines.

605. *STERNA GRACILIS* (Graceful Tern). *Locality*—Queensland. **Egg*—Of the usual shape; ground color, warm stone-grey, spotted and blotched with dark sepia, also obscured greyish markings underlying as if appearing under the surface of the shell. Length, 1 inch 8 lines; breadth, 1 inch 2 lines.

606. *STERNA (Sternula) MELANAUCHEN*—(Black-naped Tern). *Locality*—North Australia, New South Wales, and New Guinea. ***Egg*—Ground-color, rich yellowish white, spotted and streaked with brown of various shades up to nearly black, a few grey markings appear under the shell's surface, all the markings are thicker near the top. Length, 1 inch 8 lines; breadth, 1 inch $1\frac{1}{4}$ lines.

607. *STERNULA NEREIS (minuta)*—(Ternlet). *Locality*—Victoria, South and West Australia and Tasmania. *Egg*—Pale stone-color, in some instances marked all over, but more thickly at the larger end, with dark umber-brown; in others very largely blotched with the same color. Length, 1 inch 5 lines; breadth, 1 inch.

— . *STERNULA PLACENS*—(White-shafted Ternlet). *Locality*—North Australia, Queensland, and New Guinea. **Egg*—Ground-color delicate stone-grey, moderately marked all over with spots and small markings of dark sepia or umber and bluish black, the latter color underlying or appearing as if beneath the surface of the shell. Length, 1 inch $4\frac{1}{2}$ lines; breadth, 1 inch $\frac{1}{2}$ line.

Through the extreme kindness of Mr. E. L. Layard, Her Britannic Majesty's Consul, New Caledonia, the eggs of this lovely Ternlet have removed a great desideratum in my collection. Mr. Layard is an ardent and devoted disciple to Natural Science, and his name is a household authority in many of its departments.

608. *GEOCHELIDON MACROTARSA*—(Long-legged Tern). *Locality*—Queensland, New South Wales, and Victoria. *Egg*—Prevailing tint, brownish buff or pale stoney-grey, marked with large clouds of brownish red, softening occasionally into purplish brown, and mingled with underlying blotches of purplish grey. Length, 1 inch 10 lines; breadth, 1 inch 4 lines. (Legge.)

610. *HYDROCHELIDON LEUCOPAREIA (fluviatilis)*—(Marsh Tern). *Locality*—Australia. ***Egg*—Similar to that of the European variety, being of a beautiful warmish green, fairly distributed all over, but particularly around the upper quarter, with spots and blotches of umber, also some lighter markings appearing under the shell's surface. Length, 1 inch 6 lines; breadth, 1 inch $1\frac{1}{2}$ lines.

Marsh Terns inhabit inland waters, and construct nests among the rushes. The eggs here described were taken in the reedy lagoons bordering the Murray.

611. *ONYCHOPRION (Hiliplana) FULIGINOSA* — (Sooty Tern). *Locality*—Australia and New Guinea. *Egg*—Ground-color, creamy white, in some very pale, in others very rich, blotched all over with irregular-sized markings of chestnut and dark brown, the latter hue appearing as if beneath the surface; the light-colored eggs have these markings much smaller and more thinly dispersed, except at the larger end. Length, 2 inches $1\frac{1}{2}$ lines; breadth, 1 inch 6 lines.

612. *ONYCHOPRION (Haliplana) PANAYENSIS (ancesthera)*—(Panayan Tern). *Locality*—Australia and New Guinea. *Egg*—So similar in color to that of the Sooty Tern that the description of one will answer for both, but it is considerably smaller in size. Average length, 1 inch $9\frac{1}{2}$ lines; breadth, 1 inch $3\frac{1}{2}$ lines.

613. *ANOUS STOLIDUS*—(Noddy Teru). *Locality*—Australia. *Egg*—Considerable variation is found to exist in the markings of the eggs; the greater number are of a cream-color, thinly sprinkled all over, except at the larger end, where they become more numerous and form an irregular zone, with blotches of chestnut red and dark brown, the latter color appearing as if beneath the surface of the shell; but examples occur in which the markings are more numerous and almost equally distributed over the surface, while others are nearly pure white. Length, 2 inches; breadth, 1 inch 5 lines.

614. *ANOUS MELANOPS*—(Lesser Noddy). *Locality*—Australia and New Guinea. *Egg*—Pale stone or cream color, marked all over with large, irregular-shaped blotches of dull chestnut-red and dark brown, the latter appearing as if beneath the surface of the shell; the blotches are thinly dispersed except at the larger end, where they are largest and most numerous. Length, 1 inch 9 lines; breadth, 1 inch $3\frac{3}{4}$ lines.

615. *ANOUS LEUCOCAPILLAS*—(White-capped Noddy). *Locality*—North Australia, Queensland, and New Guinea. ***Egg*—Large for the size of the bird, and hardly to be distinguished from that of the Sooty Tern or other Noddies. Ground-color, warm pinkish white, blotched all over with irregular-sized markings of pinkish and purplish red, the latter color underlying. Some specimens are more thickly spotted, in others the markings appear smeared. Eggs from Mr. Layard's collection were taken on Norfolk Island. Length, 2 inches 2 lines; breadth, 1 inch 5 lines.

616. *PROCELSTERNA ALBIVITTA*—(Grey Noddy). *Locality*—North Australia and New South Wales. *Egg*—Cream-colored, sparingly spotted, and dashed with reddish-brown and grey markings, the latter appearing to be beneath the surface. Length, 1 inch $7\frac{1}{2}$ lines; breadth, 1 inch 3 lines.

Family—PROCELLARIDÆ.—Petrels.

One egg, sometimes two, placed on the bare ground, or in underground burrows on islands or headlands.

617. DIOMEDEA EXULANS—(Wandering Albatross). *Locality*—New South Wales, Victoria, South and West Australia, and Tasmania. *Egg*—Pure white and of the ordinary shape. Length, $4\frac{3}{4}$ to 5 inches ; breadth, $3\frac{1}{4}$ inches.

623. PHŒBETRIA FULIGINOSA—(Sooty Albatross). *Locality*—New South Wales, Victoria, South and West Australia, and Tasmania. *Egg*—White. Length, $4\frac{3}{16}$ inches ; breadth, $2\frac{1}{2}$ inches (Layard).

624. OSSIFRAGA GIGANTEA—(Giant Petrel). *Locality*—New South Wales, Victoria, South and West Australia, and Tasmania. *Egg*—Dirty white, rough. Length, $4\frac{1}{4}$ inches ; breadth, $2\frac{11}{16}$ inches (Layard).

630. ÆSTRELATA LEUCOCEPHALA (*Lessoni*) — (White-headed Petrel). *Locality*—Australia, except North and Tasmania. ***Egg*—Pure white, nearly oval in shape, lower portion slightly compressed. Texture of shell, fine and somewhat thin. Length, $2\frac{1}{2}$ inches ; breadth, $1\frac{5}{8}$ inches.

631. ÆSTRELATA MOLLIS—(Soft-plumage Petrel). *Locality*—East coast of Australia (occasionally). ***Egg*—Pure white, in shape inclined to oval, apex rounded, smaller end pointed ; although pitted all over with slight indentations, the surface of the shell is smooth to the touch. Length, $2\frac{3}{8}$ inches ; breadth, $1\frac{11}{16}$ inches.

For the addition to my collection of this and the foregoing exceeding rare Petrels' eggs, I am indebted to Mr. Layard. The former was taken on Uen Island, the latter on Mount Moa, New Caledonia.

635. PUFFINUS NUGAX (*assimilis*)—(Allied Petrel). *Locality*—Queensland, New South Wales, Victoria, and South Australia. *Egg*—Snow-white. Length, 2 inches ; breadth, $1\frac{1}{4}$ inches.

636. NECTRIS (?) BREVICAUDUS—(Short-tailed Petrel). *Locality*—Australia, except North and Tasmania. *Egg*—Snow-white, and large for the size of the bird. Length, $2\frac{3}{4}$ inches ; breadth, $1\frac{7}{8}$ inches.

637. NECTRIS (*Puffinus*) CARNEIPES—(Fleshy-footed Petrel). *Locality*—West Australia and New Guinea. *Egg*—White. Length, $2\frac{7}{8}$ inches ; breadth, nearly 2 inches.

638. PUFFINUS SPHENURUS—(Wedge-tailed Petrel). *Locality*—Australia, except North. *Egg*—White. Length, $2\frac{3}{4}$ inches breadth, $1\frac{3}{4}$ inches.

644. *PRION VITTATUS*—(Broad-billed Prion). *Locality*—Australia, except North and Tasmania. *Egg*—Pure white, somewhat lengthened in form. Length, 2 inches; breadth, $1\frac{1}{2}$ inches.

645. *PROCELLARIA NEREIS*—(Grey-backed Storm Petrel). *Locality*—Australia, except North and Tasmania. ***Egg*—White, somewhat oval, and, like most Petrels' eggs, of an oily smell. Length, 1 inch $4\frac{1}{2}$ lines; breadth, 1 inch $\frac{1}{2}$ line.

This and the succeeding Storm Petrels' eggs were taken in burrows on small islands off the Victorian coast.

647. *FREGETTA MELANOGASTER*—(Black-bellied Storm Petrel). *Locality*—Australia, except North and Tasmania. **Egg*—White. Length, 1 inch 6 lines; breadth, 1 inch 3 lines.

649. *PELAGODROMA FREGATA*—(White-faced Storm Petrel). *Locality*—Victoria, South and West Australia. *Egg*—Pure white. Length, 1 inch 6 lines; breadth, 1 inch $1\frac{1}{2}$ lines.

— . *MAJAEQUEUS PARKINSONI*. *Locality*—East coast of Australia. *Egg*—White. Length, 2 inches $10\frac{1}{4}$ lines; breadth, 2 inches. (Hutton.)

Family—PELECANIDÆ.—Pelicans, Cormorants, &c.

Nests constructed of sticks, herbage or sea-weed placed on trees, shrubs, or on ledges of rock. Clutch, one to four eggs.

651. *PELECANUS (Catoptropeticanus) CONSPICILLATUS*—(Australian Pelican). *Locality*—Australia, Tasmania, and New Guinea. *Egg*—Dirty yellowish-white; surface of shell, limey. Length, $3\frac{3}{4}$ inches; breadth, $2\frac{3}{8}$ inches.

652. *PHALACROCORAX (Graculus) NOVÆ-HOLLANDIÆ*—(Australian Cormorant). *Locality*—Australia and Tasmania. *Egg*—Bluish-white, limey surface. Length, $2\frac{1}{2}$ inches; breadth, $1\frac{3}{4}$ inches.

653. *PHALACROCORAX (Hypoleucus) VARIUS*—(Pied Cormorant). *Locality*—Australia, except North. *Egg*—Bluish-white, with a light coating of lime. Length, $2\frac{1}{2}$ inches; breadth, $1\frac{1}{2}$ inches.

654. *PHALACROCORAX (Hypoleucus) LEUCOGASTER*—(White-breasted Cormorant). *Locality*—Australia, except North and West and Tasmania. ***Egg*—Specimens taken from a nursery on Waterhouse Island, off the Tasmanian coast, were oval, coated with lime, and dimensions about $2\frac{3}{8}$ by $1\frac{1}{2}$ inches.

655. *PHALACROCORAX (Microcarbo) MELANOLEUCUS*—(Little Cormorant). *Locality*—Australia, except North and Tasmania. ***Egg*—Long oval, bluish white and coated with lime. Length, 1 inch 11 lines; breadth, 1 inch 3 lines.

656. PHALACROCORAX (*Microcarbo*) STICTOCEPHALUS — (Little Black Cormorant). *Locality*—Australia, except North. ***Egg*—Bluish-white, with a light coating of lime. Length, 2 inches 2 lines; breadth, 1 inch $5\frac{1}{2}$ lines.

657. PLOTUS NOVÆ-HOLLANDIÆ—(New Holland Darter). *Locality*—Australia and New Guinea. *Egg*—Dirty-white, limey shell, lining membrane bluish-grey. Length, $2\frac{1}{2}$ inches; breadth, $1\frac{1}{2}$ inches.

658. TACHYPETES (*Atagen*) AQUILA—(Great Frigate-bird). *Locality*—North Australia and New Guinea. **Egg*—Rather oval, and both ends nearly alike in shape, pure chalky white, thin shell. Length, $2\frac{9}{8}$ inches; breadth, $1\frac{7}{8}$ inches.

659. TACHYPETES (*Atagen*) MINOR—(Small Frigate-bird). *Locality*—North Australia, Queensland, and New Guinea. ***Egg*—Of similar character and shape to *T. aquila*. Length, $2\frac{3}{8}$ inches; breadth, $1\frac{5}{8}$ inches.

661. SULA AUSTRALIS (*serrator*)—(Australian Gannet). *Locality*—Australia and Tasmania. **Egg*—Long in shape, shell bluish-white, coarse and heavily coated with lime, which is frequently stained with dirt. Length, 3 inches; breadth, $1\frac{7}{8}$ inches.

662. SULA CYANOPS—(Masked Gannet). *Locality*—Australia, except West. *Egg*—Rather lengthened in form, dirty-white, stained or clouded all over with reddish-brown. Length, $2\frac{5}{8}$ inches; breadth, $1\frac{3}{4}$ inches.

663. SULA FIBER—(Brown Gannet). *Locality*—North Australia and New Guinea. *Egg*—White, and sometimes stained with dirt, thickly coated with lime, which on being scraped off reveals a bluish-white shell. The size varies considerably. Length in inches $2\frac{8}{12}$ (largest), $2\frac{9}{24}$ (smallest), $2\frac{1}{2}$ (average); breadth in inches $1\frac{7}{12}$ (largest), $1\frac{15}{24}$ (smallest), $1\frac{3}{4}$ (average).

664. SULA (*Piscatrix*) PISCATOR (Red-legged Gannet). *Locality*—North Australia and New Guinea. **Egg*—An ellipse in shape, dirt-stained white, coated with lime. Length, $2\frac{3}{4}$ inches; breadth, $1\frac{7}{8}$ inches.

Family—PHAËTONTIDÆ.—Tropic-birds.

Two eggs, placed on the bare floor in holes under rocks bordering the beach.

— . PHAËTON (*Phœnicurus*) ÆTHEREUS—(White-tailed Tropic-bird). *Locality*—North Australia, Queensland, and New Guinea. **Egg*—Shell rough in texture, moderately marked with roundish spots and blotches of purplish brown on a whitish ground. Length, $2\frac{3}{4}$ inches; breadth, $1\frac{7}{8}$ inches.

660. PHAETON (*Phœnicurus*) RUBRICAUDA—(Red-tailed Tropic-bird). *Locality*—North Australia, Queensland, New South Wales, and New Guinea. *Egg*—Ground-color, pinkish-grey, mottled or marbled (like a Falcon's egg) over the whole of the surface with purplish or pinkish red. Length, $2\frac{3}{4}$ inches; breadth, $1\frac{1}{4}$ inches.

Family—PODICIPIDÆ.—Grebes.

Nests, which float on lagoons, are constructed of aquatic plants. Clutch, four eggs.

665. PODICEPS AUSTRALIS—(Australian Tippet Grebe). *Locality*—Australia, except North and West and Tasmania. *Egg*—At first, greenish-white, then yellowish-brown. Length, nearly $2\frac{3}{8}$ inches; breadth, $1\frac{5}{8}$ inches. (Hutton).

666. PODICEPS (*Poliocephalus*) NESTOR—(Hoary-headed Grebe). *Locality*—Australia, except North and West and Tasmania. **Egg*—Dirty greenish-white, surface lumpy and irregular. Length, 1 inch 7 lines; breadth, 1 inch 1 line.

667. PODICEPS (*Sylbeocyclus*) GULARIS (*Novæ Hollandiæ*)—(Black-throated Grebe). *Locality*—Australia, except West and Tasmania. ***Egg*—Bluish-white, but often uniformly stained over with a shiny raw sienna color, and sometimes with umber. Length, 1 inch 5 lines; breadth, 1 inch.

Family—SPHENISCIDÆ.—Penguins.

Two eggs, placed under shelving rocks or in holes in the ground on headlands or islands.

669. EUDYPTULA MINOR—(Little Penguin). *Locality*—New South Wales, Victoria, South Australia and Tasmania. *Egg*—White, dumpy in form, smaller end somewhat sharp. Length, 2 inches 3 lines; breadth, 1 inch 9 lines.

670. EUDYPTULA UNDINA—(Fairy Penguin). *Locality*—Victoria and Tasmania. **Egg*—White, similar in form to *E. minor*. Length, 2 inches $1\frac{1}{4}$ lines; breadth, 1 inch $7\frac{1}{4}$ lines.

ADDENDA.

48. *EUROSTOPODUS ALEOGULARIS*—(White-throated Nightjar.)
Locality—Queensland, New South Wales, Victoria and South Australia. *Egg*—Shape nearly true oval, but a little larger in size and darker in color than that of the other species (*E. guttatus*). Ground color of a beautiful rich cream or stone-color, like that of a Teal's egg, with, here and there, roundish spots and blotches of dark purple. Texture of shell, close and fine; surface, somewhat glossy. An egg taken in the month of January on the bare ground in a thick forest of Gippsland measured 1 inch 7 lines by 1 inch $1\frac{3}{4}$ lines.

To Localities add South Australia in Nos. 7, 124, 161, 194, 202, 237, 275.

——:o:——

CORRIGENDA.

No. 249—add Tasmania to locality instead of No. 253.

Page 41, sixth line, read *scales* instead of *scabs*.

——:o:——

MEMORANDUM.

An apology is due to my subscribers for the extraordinary delay in the publication of this little work. The delay, which arose from circumstances over which I had no control, I think will not detract from the interest taken by them in the subject, nor will the value of the work as an oological reference be impaired. Moreover, I have been enabled to embody additional descriptions of new eggs and other interesting information. The total number of eggs now described is 433.

A. J. C.

SCRAPS ABOUT BIRD-NESTING

Near Melbourne, Thirteen Years Ago.



Our bird-nesting party consisted of a quartett known as the "Bunyips," and each Bunyip had a specific *sobriquet*—"Bandy," "Skinny," "Beaky" (your humble servant), and "Chicken" (my brother). Our attire was, of course, of the roughest description, and our accoutrements consisted of a coil of good Manilla rope, a sharp tomahawk, a long-handled spoon (for procuring eggs out of holes), and the inevitable "billy" and "tucker," besides each a collecting tin, a few pins and matches, not to indulge in a pipe (we were all non-smokers), but to smoke out any unfortunate rabbit or native cat that our faithful black retriever should chance to scent out.

Our "Bunyip" Club was instituted for two objects. First, to determine and observe the habits of various birds in our neighbourhood, with respect to their nidification, structure and locality of nests, shape and color of eggs, &c. Second, the amount of field exercise this would involve would be conducive to the health of both mind and body.

It would be beyond the province of this paper were I to go into details of the very many localities visited, the numerous interesting facts relative to the birds, nests, and eggs, and some amusing anecdotes attached thereto. Therefore I will content myself by feebly endeavoring to mention a few of our more favorite hunting localities, and the principal specimens we found.

Away we started one day for the junction of Gardiner's Creek with the river Yarra *via* Toorak and the river bank. We had hardly reached "Como," just on the western side of Toorak, when in a paddock hard by we discovered a Sacred Kingfisher's nest, containing four round white eggs, which were obtained with the aid of our spoon from a hollow in the bowl of a gum-tree. We had just finished blowing the eggs when one of us climbed a neighbouring tree, a large red-gum, and secured from its many holes and hollows a number of the eggs of the Tree Swallow. Here the tomahawk came into operation to chop holes large

enough to admit the hand. The eggs were white, sometimes with a few chestnut spots on the larger end. In the adjoining paddock we found a couple of nests of Brown Flycatchers, neatly constructed of hair, carefully situated in the fork of an overhanging branch of a wattle tree. Each was occupied by two eggs, of a pale bluish green color, with a belt of chestnut brown spots near the centre. On the very topmast prongs of other wattle trees were discovered the somewhat rare nests of the White-shouldered Campephaga. They were very small in comparison with the size of the birds, and were made of dried "chick weed," being open-mouthed. The eggs were three, of a beautiful light green, covered with rich chestnut markings. At this stage of affairs we were menaced by a batch of young ladies with long sticks in hand, with which they threatened to belabour us, then prosecute us for trespassing, if we did not decamp at once. We "made tracks" accordingly, not wishing to be "smitten" by such "angelic beauties." Presently we came to the swamp at the bottom of "Como;" off boots, tucked up trousers and waded in; soon found half a dozen Reed Warblers' nests, skilfully fastened between reeds or flags, with each three or four greyish mottled eggs; likewise a nest of the Little Grass-Bird, warmly lined with soft feathers, two of which were larger than the others, and met over the opening above the mouth of the nest, to keep out the rain. The eggs were beautiful, three in number, and pink speckled. Between a clump of ti-trees, near the root, constructed of dried reeds, &c., was found the nest of the Black-backed Porphyrio. The five eggs were dirty white, sprinkled with umber-brown spots. Having carefully searched the swamp, we proceeded up the river. On a willow overhanging the stream a Black Fantail's neat nest, with its delicate-colored eggs, was taken. While robbing this nest an Azure Kingfisher was observed to dart from beneath the overhanging bank, and unmistakeably proved by its movements it possessed a nest in that spot. Following up a little hole by digging brought us to seven round pearly-white eggs. A rotten stump projected out over the river, from the extremity of which "Bandy" was perched to superintend the digging out operation, when suddenly his platform snapped, and he received an impromptu bath; being an excellent swimmer he soon regained the shore. We lighted a fire to have some "tucker" and dry his clothes. On advancing by-and-bye a pair of Magpie Larks came wailing and darting overhead, thereby quickly betraying their nest, built like a large bowl of mud, lined with grass. It was situated near the end of a tapering limb of a huge red-gum that nearly spanned the river. At this stage our rope was requisite to haul "Skinny" up to the nearest bough, from whence, with much difficulty, he reached the one on which was fixed the nest. As he crawled along the limb it gradually commenced to bend. We below stood breathless, and the limb now

seemed bent to its uttermost without breaking, while he just gained the nest. I believe another ounce weight would have precipitated "Skinny," nest, and limb into the running torrent beneath. The nest contained three white eggs, rather peaked towards the smaller end, and prettily freckled with pinkish red on the larger. Now, behind Government House, where we took some Red-eyed Finches, oblong-shaped grass nests, with long-mouthed entrances. They each contained from four to seven pure white eggs. With great delight we found hanging in a ti-tree a Grey-backed Zosterop's nest, occupied by three blue eggs. This is the only Australian genus of Passeres known which lays uniform bluish eggs. But most unfortunately these just mentioned were too far hatched to be blown. "Chicken" found another rare specimen—White-frontal Sericornis. It was dome-shaped, and constructed of dried leaves and grass in a depression in the ground, behind a stump or stone, and contained three purplish mottled eggs. We reached the junction of Gardiner's Creek, had a swim, which was somewhat cold, but, nevertheless, refreshing, and returned home.

The next Saturday was a cold, miserable, bleak day. The wind was from the S.W., with occasional gusts of rain and hail. Camberwell was our destination. We proceeded along High-street road for about four miles, till we gained the first creek. In wandering through the scrub bordering it we flushed a Yellow-faced Honey-eater from its neatly-made nest of moss and hair, suspended by the rim to a branch of ti-tree. It contained three longish eggs, flesh-colored, and spotted with brown. On emerging from the scrub we espied a horse with bridle and saddle on, but apparently minus an owner. Here, we thought, was a good chance for a little equestrian exercise, and each had a capital ride round the paddock, but just as the last was dismounting a man appeared on the scene, and gave hot pursuit. Trusting to our younger legs, we made straight up hill, and thereby soon distanced him. After wandering from paddock to paddock a New South Wales Oriole's nest was found. It was cup-shaped, composed of stringy-bark, suspended by its rim to the end of a hanging gum-bough, in quite an unprotected situation. In it were four cream-colored eggs, blotched with umber of different shades. Accompanying this set was the egg of the Pallid Cuckoo, being about half the size of the foster-bird's eggs and of a uniform pinkish tint—a beautiful specimen. Then was taken in a low stringy-bark tree a nest of a Grey Crow-shrike, with a clutch of mottled wood-like brown colored eggs. The owner is about the size of the Common Magpie, but taking the circumference of its nest, made of sticks, it would comfortably accommodate an Emu. After closing our hunt with a Wattle-bird's nest, with its pair of common yet beautiful salmon-colored eggs, we turned in the

direction of home. We swam a creek which had been considerably swollen by the late heavy rains. The current was so rapid that it carried us about 100 yards down stream before we gained the opposite bank. This mode of swimming being a novelty to us, we several times repeated the performance. We struck the road, along which we ran about four miles, without stopping, against a driving rain in some 26 or 27 minutes.

Another day we went to the Caulfield and Oakleigh district. There was never a lovelier spring day; pen, pencil, or language would signally fail to picture it. In every paddock the eye met millions of vernal flowers of every variety of hue peeping through the rich sprouting grass, and the heaths were decorated in their choicest bloom, which sent forth a fragrant perfume from stock and stem as well as flower. Even the foliage of the everlasting gum-tree, with its opening blossom, among which various Honey-eaters chirped, looked fresher than was wont, and under its grateful shade the cattle were in quiet repose. In a neighboring cultivation paddock might be seen the sturdy farmer tilling the soil, with the pretty little Robins darting to and fro to catch the newly-unearthed worms that the friendly ploughshare might perchance turn-up. A beautiful clear and fresh atmosphere, with a cloudless sky, lent the scene an additional charm, and all things, animate and inanimate, seemed happy and working in perfect harmony, evincing the handiwork of the God of Nature—their Great Creator.

We had not reached Malvern before we killed a medium-sized brown snake. A couple of miles brought us to the paddocks behind the Race-course Hotel, Caulfield. Here a bit of an adventure occurred. One of the paddocks was used as an accommodation for cattle from Gippsland for the Melbourne markets. This day, however, it was only occupied by a solitary bullock, and as he appeared quiet, and near the further fence, we took no heed. But when we had reached the centre of the paddock the animal showed a fierce pair of eye-balls, and with tail erect made straight for us. Alas! the poor "Bunyips" dreadfully realized that a mad bullock was about to rudely scatter them. And they did scatter right and left, but as fortune would have it the bullock made for "Bandy," the only one who carried a gun. He, with great presence of mind, at a few yards, received the enemy with a charge of pigeon shot full in the face, which caused the beast to fall on his haunches, and beat a hasty but short retreat, and when he had *gained* himself we had *regained* the fence.

On the sunny side of prickly acacia hedges we found numerous nests of Tomtits or Yellow-tailed acanthizas. They are neat, dome-like structures, composed of grass, spiders' nests, and lichens, warmly feathered, with a small side entrance, also with a kind of double nest on top for the cock-bird to roost in by

night, or whistle to his mate by day. The Tomtit lays three pure white eggs. These nests are often the repository of a single egg of the Bronze Cuckoo. That of the Thick-billed Bronze Cuckoo resembles a little brown pebble; that of the Narrow-billed is white, speckled with pinkish red.

We crossed the Dandenong road, and entered Peck's paddock. From the top of a small sapling we took the nest of the Spotted sided Finch, containing four longish white eggs. The nest, like those of most finches, was composed of grass, dome-shaped, with a tunnel entrance. Next, in a thick fork of a gum, we took a Warty-faced Honey-eater's open-mouthed nest, made of strips of stringy bark, and lined inside with finer fibres. The two eggs were of a rich salmon color, with a zone of spots at the larger end. In the hole of another tree we took four roundish white eggs of the Striated Diamond-bird. We passed through a couple of paddocks, in one of which I chopped in two, with a tomahawk, a black snake, in the act of swallowing a large green frog, which was all slimed over. We reached what was locally known as the Bronze-wing paddock. Here we obtained a Bronze-wing's and a Podargus or Mopoke's nest. Both were carelessly constructed of a few twigs, just sufficient to ensure the safety of the white eggs, and placed in forks of horizontal limbs. The larger and warmer nest of the Magpie was next desried. It was occupied with a clutch of four well-known eggs. Just leaving the paddock, we took the somewhat rare nest of the Black-faced Graucalus, a tough structure of cobwebs, &c., fixed in a forked bough. The three eggs were of a beautiful dark green, blotched with umber-colored spots. In an adjoining enclosure, a more scrubby one, our black dog started a rabbit, which took to a hollow log. It was unfortunate sport for poor puss, because we smoked her out and the dog killed her. We carried her furry carcase home, and it made a capital, although small, pie. From the end of a wattle branch we robbed a Lunulated Honey-eater's nest of its lovely little buff-colored eggs, prettily spotted on the top. In a shady nook, on the side of a hill, cunningly hid among the trees, I found the model-shaped nest of the Scarlet-breasted Robin, open-mouthed, nicely fashioned of bark, moss and lichen, the latter material so closely assimilating to the bark of the tree that detection of the nest is difficult. This was warmly lined with 'possum fur, and contained three light grey eggs, freckled with pepper-colored spots. From the fork of a high tree out flew a screeching Butcher-bird from its nest, made of twigs, and containing four dull-colored eggs. As the day was now far spent, we made "tracks" homeward. Taking a short cut through an old cultivation ground, we discovered that a flock of domestic ducks had deposited promiscuously over the ground about two dozen eggs. We had good fun in scrambling for them, and thought it a good finish to our day's "egging." N.B.—They went very "high" for supper that night,

One Saturday, being late in leaving town, we resolved to search Albert Park, as we could not undertake a long tramp within what remained of daylight. We had hardly cleared the fence, when out from our very feet darted an Australian Pipit or ground-lark, and a few yards further on a Skylark went sweetly singing into the air. Both nests were composed of dry grass, built in a depression in the ground behind a tuft of grass. The former contained three eggs of an earthy color; the other had four, thickly spotted with bright red. In a wattle branch hung the neat little nest of the White-plumed Honey-eater, with three fleshy-colored eggs, freckled with chestnut. Then, at the top of a bending sapling, we took the exceedingly rare and tough nest of the Frontal Shrike Tit, containing two pearl-like eggs, with a few black dots on the round end. We dispossessed three species of Wood-Swallows of their temporary homes: the Common, the White-eyed, and the Masked. These eggs are so much alike in shape, size, and color, that it is difficult to determine the parents without seeing them on the nest. Those of the same species also vary considerably, but generally are of a lightish color, mottled or clouded with umber, chestnut, &c. Burr-r-r-r flashed a Painted Quail from its nest in some long kangaroo grass, where were deposited a clutch of four pepper and salt-colored eggs.

Crossing the swamp towards the sea-beach, one of us was attracted by a bunch of dried reeds floating upon the surface of the water; he carelessly knocked the top off with his stick, and to our great astonishment exposed two dirty cream-colored eggs, which proved to be those of the Black-throated Grebe. Out of the reeds, on a little island close by, flew a frightened black duck. We abstracted ten eggs from its warm downy nest. On the sea beach, about thirty yards from high-water mark, we found several pairs of Red-capped Dottril's eggs. There is no nest, and the eggs so closely resemble in color the sand that only keen eyes can discover them. Returning through a small belt of dwarf scrub, a bird flew out feigning a broken wing, then lay on the ground as if in a fit, and tried to decoy us after it. Poor little thing! it was a White-fronted Ephthianura. But we knew too much for it, for carefully imbedded in the heart of the handy bush, we found its nest, with three reddish-spotted eggs.

On the Prince of Wales' Birthday, at 4 o'clock in the morning, we set out on foot for the Dandenong Ranges. As we "pegged" out about four miles per hour it was delightful to watch the gradual break of day. The fast waning moon and the bright morning star gave the eastern sky an additional charm. When we gained the other side of the old Gardiner Hotel we overtook a spring cart drawn by a young restive colt. In the vehicle was seated a little boy, crying bitterly. On questioning him, he said his father had got drunk and was locked up, and begged us to take

him to his home at Oakleigh, because he felt frightened and could not manage the horse. We took compassion on the lad and conveyed him, his horse, and trap safely home, and presented them to his mother, at the same time placing before her the position of affairs ; but to our intense surprise, instead of expressing gratitude for our kindness and trouble, she scattered us with a huge broom-stick, informing us that in future we had better mind our own business.

On the fall of Stott's Hill, approaching the Dandenong Creek, we were attracted by a Laughing Jackass or Great Brown Kingfisher, flying from a hole in an overhanging tree. One of us joyfully ascended, only to be disappointed by finding a couple of half-fledged young ones instead of round white eggs. Shortly after 9 o'clock, we reached the base of the ranges ; soon made a blazing fire, boiled the "billy" and had some "tucker." Wandering down a flat by myself, I discovered what I considered a *beau ideal* nest and eggs, which proved to be those of the Yellow-breasted Robin. The nest was cup-shaped, and exquisitely made, formed of bark and grass, inlaid with small gum leaves, and lined around the mouth with moss and lichen. It contained three beautiful apple-green eggs, spotted at the larger end with brown. I took another elegant nest, that of the White-shafted Fantail, a very small, compact piece of work of cobwebs, built in the shape of a wineglass, and placed on a single horizontal branch, the handle-like appendage hanging underneath. The cream-colored eggs, with chestnut markings, were three in number. The birds were remarkably tame, and the hen had literally to be pulled off the nest by the tail before she would quit. I was then joined by the rest of the party. We killed a large black snake, out of which we took thirteen eggs. Shortly afterwards, secretly placed in a bush near a watercourse, I espied a White-throated Thickhead, with its lovely lemon-colored breast, buried in a grass-made nest. When flushed, two yellowish white eggs, with darker spots about the apex, were revealed.

On a mountain's side, the peculiar vocality of a pair of Friar Birds or Leather-heads betrayed a home in the neighbourhood, but as they confront enemies a long way from their nest we had to exercise considerable diligence and perseverance to discover it. The nest was made of strips of bark, and lined with grass, and attached to the end of a pendulant gum branch. The eggs, two in number, like nearly all Honey-eaters' (of which one-tenth of the Victorian birds consist), were of a fleshy or buff color ; only in this species the spots are fainter and smaller.

It was about noon when we took a trip half-way up the mountains to what is locally known as "the grave." On returning, mid-way between that spot and our camp, we were accosted by a party of lady and gentlemen picnickers. Of course, we replied to their "Good-dav." and pulled off our slouching hats. One

gentleman, with a pretty dark girl leaning on his arm, said in a jocular style, "You will find plenty to eat down there; just help yourselves." "With a hook," replied one of us. Another, "You don't catch this colonial." The gentleman laughed and repeated his statement, adding—"See that the horses are all right first." Still thinking he was poking fun, we said "Good-morrow," and pushed on. Feeling the pangs of hunger acutely, which the pure mountain air and ozone had sharpened, we hastened our downward steps, when, to our great surprise, on rounding a sharp bend in the track, what did we behold? O, for fifty appetites! Laid out on the green sward was a large tablecloth strewn with ham, chicken, roast duck, &c., and all sorts of pastry; and in a case close by were lemonade, wines and spirits. Now we realized we had been too "cheeky" to our generous friends. First, as they requested, we saw that the horses were all right; they were quietly munching behind a dead stump. Then we proceeded to business, and it is almost superfluous to add the stereotyped phrase that "we did ample justice to the good things," more especially as we were awfully hungry. When the good folks returned I suppose they would say, what an old Scotchman once said of us, "Hey, mun, they's got terrible pooches."

On returning near our camp "Chicken" found in some undergrowth a Blue Wren's nest, wonderfully made of skeleton gum or eucalypt leaves, the vegetable matter having been rotted off them by the action of water, the fibres only remaining. "Chicken" said the nest contained four eggs, but on further examination we could only find two, and told him he must have seen "double." He made matters worse by voluntarily stating he had nothing to drink at the "spread" up the track.

We arrived home safely about 8 o'clock in the evening, sixteen hours after we started, during which time we computed we did 48 miles walking, that is, 21 miles each way to the ranges and back, and six miles about the gullies, &c.

One day, late in November, two of us "made tracks," as our American cousins say, to the Werribee river, in the vicinity of Messrs. Chirnside's run, where we succeeded in adding two valuable species to our collection, one being the Fairy Martin. These interesting little creatures nest in families of about ten to twenty on the face of the steep cliffs that overhang the river. The nests are of mud, champagne-bottle shaped, either built singly, or two or three conjoined about the shoulder, but each with a separate neck. The inside is furnished with grass, and each one has three or four white eggs, sometimes slightly spotted. Some of the nests were tenanted by those troublesome immigrants the Sparrows, who either occupied old nests or more probably dispossessed the rightful owners of their new ones. The other was a small hawk or Nankeen Kestrel's. On the brow of a great red cliff, about

twenty or thirty feet high, the bird flew out of an aperture, where we were convinced it possessed a nest, but how to gain the coveted prize was no small difficulty. I succeeded in climbing so far when a treacherous piece of earth gave way, causing me to descend more quickly than I ascended, and landing me on the broad of my back in the river, to the intense amusement of my friend. However, I splashed out as best I could, and travelled down stream and brought up a couple of long dead saplings, and with the aid of my friend, who had more pluck than I (mine having been damped), after two or three sensational attempts, reached the crevice in the cliff, where, on the fine dirt, lay four dumpy eggs, blotched or clouded all over with chestnut-red. Situated on the top of a large ti-tree I observed a Crow's nest. On climbing up to and peering into it, I was saluted by a pair of big young ones with wide-extended red gapes. To complete our day's adventures, shortly after leaving the Werribee railway station, our carriage, which was at the tail end of the train, by some unaccountable manner, ran off the line, tearing up ground and sleepers for about fifty yards, and all but capsized. To make the confusion worse, it was dark, and there were no lights in the carriage, which was full of passengers. Some of the weaker sex shrieked out, but, as my companion remarked to me afterwards, my only care during the *fracas* was the safety of my new-taken hawk's eggs, which were carefully placed in a "billy" under the seat. After a detention of a few hours, until the next train arrived from Geelong, we finished our journey without further hindrance.

OUR FIRST CAMP OUT.

It was approaching Christmas, 1869, when we were preparing for our first camp out. Our party consisted of the original "Bunyips," with our ever faithful dog Flora. We decided that Ferntree Gully, in the Dandenong Ranges, should be the scene of our first camping operations. The ranges are situated about twenty-five miles due east of Melbourne. Weeks before Christmas our conversation was nothing but about the gully, and the long days passed away as if they were months. At last the appointed time to start came—Christmas Eve. The rendezvous was at my place, Malvern. We started about half-past 7 o'clock (of course on foot) with our necessary swags, &c., for three days out. We were all new chums, so to speak, at camping out, and some of our swags were unnecessarily large, and had a regular "new chum's set" on them. Spanking along at the rate of four miles an hour on the Dandenong-road, we soon reached Oakleigh, where we left the main road on our right to take the Gully road. Nothing particular occurred till we arrived at the Cheshire Cheese Hotel, about a mile and a half on this side of the Dandenong Creek, and seven miles from Oakleigh. Here a slight, and what might have been a serious,

fracas took place. One of our party asked for a drink of water, when a drunken man came out and made some insulting remarks to him. On being remonstrated with by us, he said his pugilistic capabilities were such that he would fight any one of us. Accordingly he made a vicious drive at Chicken, when Skinny rushed between them and tripped the drunken chap up, which caused him to plough up the road and dust for some five yards or so, very much to the amusement of some wood "jammers," who had by this time collected. The chap recovered himself, and made a blow at Bandy, who dodged it. Again he made another, when Bandy presented the muzzle of his gun in his teeth, and threatened to shove it down his throat if he did not desist; whereupon the fellow said, "Is it guns you mean? All right; I'll meet you with a gun," and staggered back into the hotel. Now we thought it high time to make tracks, and hardly did we get a hundred yards up the road, when he followed us with a loaded rifle, and fired. The ball whizzed past in close proximity to our heads. In case he should fire again, we turned sharply off the road into the bush, and ran in for some short distance, our enemy still pursuing us. At this stage we deemed it advisable to plant amongst the trees. He energetically searched for us for some time, and he brushed just past us; but, being unsuccessful, he eventually abandoned the project with sundry oaths. When the villain was gone we reconnoitred, and thought it best not to attempt to regain the road until morning, as we did not know its exact position, having in the excitement of the chase turned this way and that. There we were, a pretty quartett, sitting in a row on a log, like so many Podarguses, some leaning on their guns, with their swags carelessly thrown on the ground before them; another in deep meditation watching the moon, which had just risen over the tops of the distant trees, with its pale silvery light struggling through the clouds; while the night was still. Not even a breeze shuffled the leaves. For the first time in our lives did we experience the stillness of an Australian forest, the stillness only being broken by the distant and mournful note of the Mopoke, or the more melancholy note of the Curlew. We did not remain in that position long, but lay down under a large gum-tree, and were soon asleep. Long before daybreak we heard the *welcomé* laugh of the Jackass, which was quickly followed by the Magpie piping forth his musical note.

When the day broke, the fence was not more than two or three hundred yards off, so we cheerfully humped our swags and briskly walked down the road. It was a beautiful summer morning—all the birds were singing sweetly. Ahead of us could be distinctly seen the blue smoke from a farm house chimney, slowly curling upwards into the fresh air. When we passed, the dogs ran out and barked at us, as if glad to see us, instead of showing an air of defiance. We jogged along for miles in this style, till at

last we came to a standstill, the road terminating. "Holloa! what's this?" said one of us. "We're off the track," said another. Thus we began to get uneasy, and came to the conclusion, which afterwards proved to be correct, that we had taken the road that ran at right angles to the one we should have travelled, placing us several miles south of our track. It was very plain to us now that, during the exciting contest of the previous evening, we turned into the bush which must have been near the junction of the two roads, and not thinking of that, the first road we saw in the morning we naturally took to be ours. However, we held a council, and decided to take a bee-line across the country to One-tree Hill, which could be plainly seen, like a pikestaff, distant about seven miles. We commenced our journey, and a tough one it was. First we descended a long open timbered hill, at the foot of which was an almost impenetrable ti-tree scrub. We ploughed through it like young tapirs. It was so thick that we had literally to break it down by main force. At last we crossed it, and once again we breathed; but it was only from the frying pan into the fire, because our route lay through thickly grassed country. The tufts were higher than our heads, and strewed with immense logs of dead timber, over which some of us got tremendous bursters. At times we caught an occasional glimpse of our coveted object, One-tree Hill. Next we came to a burnt scrub, and crackled through it, only to come out as black as niggers. Then a large mangrove swamp. In we plunged, nearly up to our necks at first, but soon obtained a little better footing. Here Chicken dropped his swag into the water, which was not recovered without some difficulty, it having got into a current, and was sailing away. And we went splashing through the mud and water till we came to a tolerable deep part. In Indian file we succeeded in getting through it, wet only up to our waists, save Skinny, who ran through it, sending up a terrific spray of water, as only his white-colored wideawake was visible. He finished his wild career by slipping on a sunken stump, thereby causing him to take a dive. The rest of us had a hearty laugh at him. At last we reached terra firma, but here a new and unexpected difficulty presented itself. When we emerged from the scrub we came to the boundary of a thick forest, which completely obscured our view of the hill; neither had we a compass between us, and had not the slightest conception which was north, south, or any other point, and it was now cloudy; therefore the sun was of no use to us. While thus contemplating, one of us espied a little hut gleaming through the trees, and from information there received we were immediately on the right track at the foot of the range.

We pitched our camp on the flat just behind the Fern-tree Gully Hotel, constructed a roomy mia-mia, boiled the billies, and had a good feed and a laugh at the ridiculous incidents that

occurred during the morning ; likewise congratulating ourselves in having so successfully navigated the frightful swamp, into which, the man in the hut told us, a good man had once entered never to return again.

After a rest we started for the top of One-tree Hill, except Ohicken, who was "baked," and Flora. We travelled a winding and inclining road for about two miles, till we arrived at what is known as the grave. It is the grave of the first white man's wife, who lived on the ranges many years ago. There is nothing to be seen now but a mass of entangled wild briars. Here the real beauties of the gully commence, and the trees assume more formidable dimensions both as regards length and breadth. On leaving the grave we travelled two or three hundred yards through the thick underwood and grass, commonly called "policeman" grass, because if rubbed with the grain it is quite smooth, but if the reverse will cut frightfully. Then we entered the gully, followed up the watercourse, and commenced to climb over the slippery boulders and rough trunks of fern-trees ; but we were well repaid for our exertions. The gully was like an ice-house, cooled beneath by the beautiful crystalline stream, while the thick foliage of the fern-trees overshadowed it from the fierce rays of the sun that by this time had become very oppressive. When near the head of the gully a magnificent view presented itself. Before us were three giant gum trees, towering far above all others. We afterwards learned that they are designated "The Sisters," and their measurement by competent persons is said to be about 350ft. Turning round and looking downwards, the rich green foliage of the tops of the fern-trees, which marked the watercourse, formed an agreeable contrast with the deeper foliage of the trees on the hill on each side of it. We found the source of the gully ; it rises from under a huge granite rock, near the top of the mountain, in a mass of musk-tree scrub. Shortly afterwards we were standing under a solitary tall dead tree, exactly on the summit of the highest mountain of the range. The timber all round us was felled by surveyors, except our singular friend, which was left as a landmark, and has often been the guide to many a weary traveller. Here is the grandest and crowning view of all that we had ever seen. Our northern and eastern views were partly obscured by the summits of the adjoining mountains ; but looking west, the land seemed to lie at our feet in the form of an extensive wooded plain, as serene as the blue sky above us. In the distant loom could be descried the faint outlines of Port Phillip and the smoke and haze that indicate the position of Melbourne ; further still, Mount Macedon, with smoke yet ascending from its smouldering bush fires. Then turning south-west, range after range of low sugar-loaf hills appeared gradually, diminishing in the blue distance, with the undelineated form of those on French Island, Western Port.

After feasting on this rapturous scenery for about half an hour, we carved our initials on the tree, then directed our thoughts campward ; but how to find the track back was the perplexing point none of us knew. During the exciting rush for the top we took no landmarks. A bit of a warm argument then ensued, when I succeeded in getting the others to follow me, and, after tumbling over miscellaneous logs, long grass, and bush, I succeeded, more by good luck than good management, in finding a splitter's track. However, it did not lead us to the gully, but down the hill, on the southern side of it. We followed it successfully for some distance, till we lost it, and got into a complete maze of prickly scrub. The sun by this time had commenced to dip towards the western horizon, and the thought of being lost in the bush for a night, without compass, matches, or food, struck terror into our hearts. While tearing through the scrub in a kind of dilemma, to our great but agreeable surprise we accidentally came on the right road. With renewed vigor we joyfully accelerated our steps back to camp, and arrived there just before sundown, to be welcomed by the bark of our dog, a blazing fire, the billies boiled, and everything ready for supper, which Chicken had prepared during our absence. The meal over, we made everything snug for the night, collected the necessary wood for the fire, and turned in, thoroughly satisfied with our day's amusement. At daybreak we were up, loaded our guns, and went out in quest of game. We had not travelled far before we came on to a stringy-bark flat, which abounded with Bronze-wing Pigeons. We diminished their ranks by several braces, and likewise bagged a good many Wattle-birds and King Parrots. This finished the morning's work. In the afternoon we went in search of bears, shot one or two, skinned them, and returned to camp. In the evening we did a little 'possum shooting. Next morning more Bronze-wing shooting, and home was the cry in the afternoon. Once again we shouldered our swag and paced briskly *en route* for home. Arrived at Dandenong Creek, we had delightful swims and more "tucker." On leaving the creek we ascended a nasty long pinch, commonly called Stott's Hill, from the top of which we saw the last of the ranges, and in such a transporting state that it will take years to erase their appearance from our memories. With a beautiful setting sun shining on them, their romantic rotund form partook of the richest purple that one could imagine, while between us lay a magnificent forest of trees, the warm green of which as it disappeared in the distance blended harmoniously with the rich hue of the mountains.

We arrived home all safe at 8 o'clock, being six hours from the time we left the gully. Taking off an hour for stoppage at the Dandenong Creek will give twenty miles in five hours, or an average of four miles to the hour. Thus ended "our first camp out."

A WEEK IN THE WILDS OF GIPPSLAND.—1877.

LYRE-BIRD SHOOTING.

About twenty miles northward of Brandy Creek, now properly speaking, Buln Buln (or Bullan-Bullan, the aborigines' name for the Lyre-bird), towards the Baw Baw Mountains, is situated Neerim, a place consisting of a few selections containing some of the best land in the colony. The soil is of a rich chocolate color, its richness being substantiated by the rank growth of vegetation it sustains. The reader may have some idea of this semi-tropical, so to speak, vegetation, if he can imagine three great forests rolled into one, thus :—First, thickly studded, elegant fern-trees, entwined with all sorts of parasitical creepers, forming fairy-like bowers, carpeted by a ground scrub of innumerable ferns of all species ; second, medium-height trees, such as sassafras, musk, blackwood, hazel, wattle, &c.; and third, towering above all, a thick forest of gigantic gum-trees, erroneously called mountain ash, but all white gums (*Eucalyptus amygdalina*).

These noble gums are the tallest of all trees in the whole world. On a mountain slope, a forest will average from 200ft. to 300ft. in height, and all as straight as arrows. Many fallen trees have measured 350ft. in length, and I read of one that, by actual measurement of tape, was 435ft. long. The tallest of the famous big trees in California is 325ft. The mountain ash is, I think, scientifically called *Panax sambucifolia*, and has compound leaves, and, therefore, is totally dissimilar to the white gum.

Each of the selections (320 acres) has two or three delightfully strong running spring streams, but there is no doubt, as the land is cleared, so will the springs materially decrease, if not altogether dry up, because at present the sun seldom or never shines upon the ground ; therefore all the moisture soaks in which would otherwise evaporate. It is rather better than three years since the selections were taken up. The industrious selectors have made good progress in clearing such awful country, and in fencing and sowing grass. They had a very excellent burn this season, on account of the exceptionally dry summer. There is now a dray track cut by the Government, from the main road, up through the selections, and leading on to the head of the Tarwin River, where the tin mines are located. At the time of my visit (February), the weather was exceedingly hot, and the atmosphere charged with thick smoke, rendering it quite pungent to the eyes ; therefore one may fancy that my walk up was by no means very pleasant, especially as there were at intervals roaring and burning forests on either hand, causing trees to fall across the track in all

directions. However, although I was alone, it was infinitely better than my journey up, two years previously, before any dray track was cut, and I vividly recalled to my mind that time when I joined a few selector friends at Brandy Creek, and struck a track which was gently inclining all the way, and was so hard to travel that it took us nine hours to reach our destination, although we wasted very little time on the road. I never wish to traverse such a rough road again for pleasure. First up one hill and down another, through gullies and thick scrub, over thick logs and stumps, through ruts and mud, tripping over fern roots, and bang into a neighboring tree; perhaps you go one side of it, and your swag the other. Sometimes on entering the underwood, principally consisting of fern-trees and sassafras, it was so thick overhead that it completely darkened our path, although the sun was shining brightly at the time. So great, indeed, was the obscurity, that several times we lost the track through not being able to see the blazed trees, which we had to follow, now and then, for some distance. Therefore it behoved us to be very careful, for if we got off the track in such country as this, we would be, as the colonials say, "up a tree." We passed over seven or eight beautiful streams, some of them being large. Their waters were delicious, cool as ice, and clear as crystal; some of these streams formed the finest fern-tree gullies I have seen in the colony. On the road up we got swarmed with land leeches. They fastened with the greatest tenacity on our legs and faces, and especially on our necks, and on pulling them off we bled profusely. I was rather scared at first, but I soon got used to it. If we stood in a damp place for a minute, we would see myriads of these creatures making straight for us from all directions, even down the trees. Mosquitoes were there in myriads, not to mention fleas, which were simply innumerable. I put up at the bush hut of one of my friends. The more interesting and primary object of my visit was to shoot the Lyre-bird, only procured in the wildest of country. The Lyre-bird—called by the colonists Pheasants; by the Yarra tribe of aborigines, "Bullan Bullan," that being something like their native note—is about the size of a lanky domestic fowl, and valued on account of the magnificent tail of the cock bird. The general plumage of the bird is dark brown. The upper surface of the elegant tail, which is about thirty inches long, is blackish brown; under surface, beautiful silvery grey; in the large outer feathers on each side (forming the lyre, hence their name), the web is white and transparent, crossed by numerous bands of rufous; and the margin of the inner web and tips black. There are also two curious narrow centre feathers crossing each other at the base, and curving gracefully outward at the tip. The tail is new in February, but does not attain its full beauty and perfection until mid-winter. With regard to this bird, Gould, the celebrated Australian naturalist, says:—"Were I requested to suggest an

emblem for Australia among its avifauna, I should without the slightest hesitation select the Lyre-bird as the most appropriate, it being not only strictly peculiar to that country, but one which will be regarded with the highest interest, both by the people of Australia and by ornithologists in Europe." It is, no doubt, very peculiar, and the shyest of all birds; you may be in the bush for weeks, and hear them all around you, yet never see one. They only lay one egg, of purplish grey, with numerous blotches of purplish brown, especially at the larger end. Their nest is very hard to find. Another peculiarity is, that each has a little mound of dirt or hillock which they scrape up with their immense claws to promenade on, while displaying their beautiful tails by reflecting them over their back, within a few inches of their head, all the time making the gullies ring with their melodious liquid calls, and at intervals mocking different birds to the exact note. I have heard them mock the Jackass, Parrot, Cockatoo, Butcher-bird, Coach-whip-bird, and even the solemn Mopoke. Their food consists of insects, land leeches, snails, &c. There are three species of Lyre-bird in Australia, of which the Gippsland Queen Victorias (*Menura Victorice*) is the most handsome.

Notwithstanding their proverbial shyness, I succeeded in bagging seven really beautiful cock-birds. They are generally hunted with little dogs, which "tree" them and attract attention, thus allowing the hunter to approach near enough to shoot. But this mode has a great disadvantage. You are obliged to follow the dog wherever it leads you, scrambling like to break your neck, up one gully, down another, then once or twice round, and you are "bushed" in such a scrub there is no knowing when you will effect an escape. The month before I was up a man was lost for five days.

I will now describe my *modus operandi*, which only requires great patience. In the morning you patrol leisurely along the track or survey lines till you hear a bird merrily whistling on his hillock a little distance in; then you commence carefully—oh, so carefully—for one false step, an extra shuffle of the leaves, or a crack of a twig, and your prey disappears as if by magic—to crawl on your hands and knees, as often wriggling along on your stomach through the ferns and scrub, from stump to stump and tree to tree. The bird sometimes stops, as if instinctively knowing danger is approaching, whereupon you have to become like a statue fixed to some fern root, and dare not move a muscle, not even if you feel leeches crawling up your legs or a mosquito biting the extreme tip of your nose. Presently he commences whistling joyfully as ever. On you creep, every yard nearer, so that with excitement your heart increases in palpitation till it throbs so loud you fancy it will frighten the bird. All this time great beads of perspiration are rolling off your forehead, and distinctly pattering on the dried leaves. Now you can fully realise what Gould says—"None but those who have traversed the rugged, hot, and suffocating bushes

can understand the excessive labor attendant on the pursuit of the *Menura*." At last within shooting distance, peering through the ferns, with uplifted gun and trembling finger on the trigger; but, alas! that second your game is off noiselessly and unperceived; it, having sharper eyes than you, discovers you first. There is no alternative left but to retrace your steps to the track, and your chagrin can be more easily imagined than expressed. You may repeat this operation five times before you even get a shadow of a shot. However, out of ten birds I fired at, I bagged seven, two of which I dropped while they were scampering off through the ferns. I am glad to see that lately the Governor-in-Council has been pleased to place them under the Game Law. For the benefit of whom it may concern, I quote the Act—"Close season, from the 1st August to 31st January in each year."

While reclining on a log listening for birds, one hottish afternoon, with an overcast sky and a north wind blowing, suddenly there was a great calm, every leaf motionless, followed in the distance by a mighty rushing sound like the approach of trains or a forest on fire. On it came, gradually louder and louder, till it burst on the locality,—a change of wind that blew with hurricane force. Trees that just a minute or two before were languid became an agitated mass, swaying their huge boughs to and fro as if to break them. All was a scene of confusion and noise; dead leaves, bark, and sticks fell in showers, green bows as well as dried snapped, saplings distorted, and a large white gum, nearly 200 feet high, fell with horrifying crash, crushing everything beneath it. Again it became calm.

One night four or five large gum-trees caught fire. Being hollow, they were like huge chimneys. The fire rushed through and roared like a hundred furnaces, throwing long tongues of livid flames far above their height, illuminating the forest with their effulgent splendor; and the gyration of millions of sparks, as they flew upward and fell in showers over the country, was something transcendent to behold. The appalling effect is when the tree falls. With the velocity of falling, the branches whistle through the air like so many cannon balls, followed by a terrible prolonged crash, making the hills echo and re-echo. Finally the trunk reaches the earth with a tremendous dull thud, causing the ground to quake under your feet.

On the road down, the landlord of the Northern Junction hotel, on main road, a mile and a half this side of Brandy Creek, gave me an invitation to his "house warming," which I accepted, not on account of any pleasure I might derive, but simply to satisfy my curiosity as to what a country "spree" was like. The house could not accommodate the sixty or seventy visitors who came from far and near. There was erected in an adjoining paddock a spacious fern-bower, where was spread a most sumptuous supper; in fact, quite elaborate for the country, and even town, what with

hams, turkey, goose, roast beef in abundance, not to mention blanchmange, puddings, and pastry of all sorts. The only indispensable article wanting was champagne, and even that, I understand was ordered, but did not arrive until the following morning. After supper, dancing and singing were kept up without flagging till sunrise the next morning. By the way, if any traveller wishes good substantial meals, and comfortable clean bed, at reasonable prices, try Smith's Northern Junction hotel.

I returned to Melbourne by the opposition coach, Bradley Bros. and Co.'s. Although the celebrated Cobb and Co.'s started before us, and had at stages one and sometimes two horses in excess of us, we arrived in town before it, and by paying 5s. less fare.

Finally, taking all things into consideration, I arrived at "Home, sweet home," very much impressed with my somewhat rough week's out.

A TRIP FROM MELBOURNE TO WENTWORTH (N.S.W.)

It was on a genial afternoon in the spring of 1877 that my esteemed friend L. and I left Spencer street railway *en route* for Wentworth. L. preferred a smoking compartment, I a non-smoking. Parted with two friends at Keilor road station, their destination being Bacchus Marsh. On looking round there remained but two passengers in my compartment—a prepossessing young married lady and child. A lively conversation on various topics soon sprung up—Mark Twain, ferns, oology, zoology, especially about the quaint little amphibious animal the platypus, *Ornithor hynchus*. By this time we rounded the frowning brow, wooded to its very summit, of old Mount Macedon, our "iron horse" puffing and laboring heavily up the incline. On opening the carriage window my ear instinctively caught from one of the gullies the clinking notes of Hill Crow-Shriek, (*Strepera arguta*), with their anvil-like ring; hence the scientific specific appellation. At sundown reached Castlemaine; stopped ten minutes. On thrusting my head out of the window a Goth of a fellow, with a basket on his arm, shouted in my ear "Apples, oranges, figs, *Melbourne Punch*." Sandhurst, 8 o'clock. Here my interesting lady traveller bid me a most polite good night, and as the door opened she fell into the arms of her loving husband, a big grizzly, bushy-whiskered man. Looked for L., had a cup of tea and half-an-hour's spell together. Entered the Inglewood train. This time L. persuaded me to go into the smoking carriage with a Government official who was being transferred from Echuca to Swan Hill. With the knowledge we had to travel all night I indulged in "forty winks," while they smoked. Close upon midnight

away we started from Inglewood in a four-horse coach, and merrily bowled over the Loddon Plains. Passengers numbered six. Changed at Serpentine, Four Posts (as the name suggests, the remains of an old dwelling), and Durham Ox. Here we not only changed horses but driver and coach, while we watched "The daylight dawning o'er hill and o'er vale;" but, alas! the latter sentiment had to be imagined, for when day broke we found ourselves on a barren red plain, extending to the very horizon. Broke our fast at Kerang, on the Loddon. Country getting a little more attractive; therefore, as no person occupied the box seat, I endeavored to obtain it, to have a "yarn" with the driver. But judge my astonishment when he turned round very snappishly and said:—"You would not come up when I wanted (cold early dawn), you shan't come now," and literally shoved me off. Replied:—"All right, old man, hold your hair on! I'll return from whence I came, and take my whisky flask with me." Consequently, he drove the whole day by himself, while we inside were exceedingly jolly; time passing agreeably, yarning, smoking, &c., not forgetting an occasional nip of whiskey, the surrounding country assuming a still better appearance. The track wound about a few placid lakes and lagoons, in some of which Black Swans dabbled with their long graceful necks, others peacefully picking their feathers on a green shore with a brood of cygnets pattering round them. Wild Turkeys were passed in abundance. A terrified Emu crossed our track, taking great fright at our coach and team. It was e(a)musing to see him "put on the pace." For many miles we skirted the shore of Lake Bael Bael, a beautiful sheet of water, which receives the river Avoca. Passed a good many travelling mobs of cattle and flocks of sheep, bound for the Melbourne market, the former from Queensland and latter from over the border. About 3 o'clock in the afternoon caught the first glimpse of the great winding River Murray, and shortly were in Swan Hill. Here ends the first day's (twenty-five hours somewhat long and tedious) journey, 230 miles. Put up at Garden's hotel. L. and I strolled down to the river, which here was about three times as broad as our Yarra, winding swiftly through a flat plainy country, devoid of trees. Went on board a steamer, "The Rodney." Visited a couple of blacks' mia-mias and had a "yabber." There was one old warrior called "Governor" who had been blind for several years from age. Meanwhile, another blackfellow and his dusky spouse arrived, carrying a huge cod-fish just caught in the river. There is a story told about this pair. On one occasion, during the absence of her lord, the lubra got intoxicated and was running about the township clad only in nature's garb, consequently she was "locked up" by the local constable. On the return of the blackfellow the constable related the circumstance to him. The aboriginal replied, screwing up his right eye and dropping his under jaw:—"Dear me! Mr. So-and-so, what a

disgrace to you and me. I'll teach her colonial mac(ex)perience when she comes out." Returned to the hotel in time for a sumptuous dinner. It may be imagined that we did it ample justice after our tiresome journey. The company consisted of eight or nine persons of more or less importance. Conversation was lively and varied; amongst other subjects I was backed to sleep any man in a four-horse coach for a wager. I was reputed to have performed it in quite a professional style, while fellow-passengers endeavored, but signally failed, by either bobbing their heads into the opposite passengers' stomach, through the roof, or out of the window. Bedtime—enjoyed refreshing sleep. Started next morning at 5 o'clock, in an open coach, L. and myself being the only passengers. On settling down in my seat, questioned the driver, "how many miles have we to travel before breakfast?" "Fifty-five, sir!" turned up my extra opened eyes, and nearly fell off my perch with fright. Can't stand 55 miles on an empty stomach, so had to "sit" to it. We rattled over the grassy downs, with Native Companions gamboling about, and through fine Murray pine ridges, succeeded by scrubby flats, with a few "cheeky"-looking kangaroos staring at us. Muttered to myself, "My esteemed marsupial friends, if I had a wire cartridge of No. 2, wouldn't I make you hop." But this pleasant aspect of affairs did not endure long; a nasty, cold, drizzling, rain set in on our faces, making us feel most uncomfortable. Now travelling along muddy stunted box-tree flats side by side of an occasional "billabong" (*i.e.*, a stream emerging from the river, and entering its parent lower down) or the river itself, disturbing some peaceful Ducks, here and there a solitary White Crane, or perhaps, screeching overhead, a flock of lovely Rose-breasted Cockatoos, as well as yelling white Sulphur-crested ones. Here we were within an ace of broken necks—joking apart. Crossing over a rough log culvert or rustic bridge, with unprotected sides, the leading horse shied, causing the coach to run within an inch from the edge; if we had toppled over there would have been an end to all our little troubles. Shortly after this narrow escape a steamer passed. It was quite refreshing to see a large steamer steering between the gum trees, and to hear its shrill whistle in those lonely parts. A few more kangaroos and a flock of seven Emus, last of the game; affairs getting very miserable, pangs of hunger frightful, mud splashing on our faces from the galloping horses in front; road muddier; horses getting beautifully less, started with four, next stage three, now down to two; reckoned with ourselves, if this reduction proceeds, before we reach Euston shall have *nil*. At last the dinner (or rather breakfast) shanty hove in sight; with joy we hailed it, pulled reins, jumped down, could hardly walk for hunger, expected to be saluted by an hospitable landlord, instead of which were received with an off-hand "Good day, dinner will be ready shortly," and commenced to scrape out his dirty black

stumpy pipe. Oh! the viper! Was not this positive agony for starving men. After about an hour's great suspense, which was endured with a certain amount of Christian fortitude, a squeaky female voice called "Dinner!" L. and I glared at each other, hardly believing our ears, and simultaneously made a frantic rush through the doorway; he jostled into the landlord, while I trampled over three chickens and nearly tripped over an old sow in the gangway, into the back premises, to this dinner; without grace (graceless lot) dived into some mutton chops. Oh! horror of horrors, tough as old cow-hide, couldn't eat them; shoved them aside, and took what appeared to be a shoulder of mutton (but afterwards proved to be billy-goat); couldn't touch it either, positively raw; then had a shot at some potatoes, which were frightfully smoked, and gravy fifty per cent. ditto. In desperation I grabbed at a custard, which was passable, and finished off with a rubbishing cup of tea. This *really splendid* dinner cost us half-a-crown apiece. Wasn't it cheap? L. said, "Did you ever eat such an abominable meal? If it were not for the long journey before me, I certainly would thrust my finger down my throat." Another start, heavy rain, only a sack to protect our knees, frightfully muddy country, a few belts of low stunted trees, not a blade of grass for miles, nothing but mud! mud!! mud!!! Next stage horses were fagged out. I unwillingly got out, and, with the aid of a long sapling, urged on the near side horse, my feet clogging at every advancing step, the driver on the other side lashing furiously, with not a few oaths, while L. (wise man) preferred driving; he at length was obliged to dismount to lighten the trap, and in doing so slipped off the nave of the wheel on the broad of his back into the mud. I really could not help laughing heartily. Tearing through this quagmire the concern ran crashing against a tree and smashed a lamp, which the driver swore that L. broke when he accidentally fell off the wheel. As the sun had far spent his "western wheel," had the last change for the day; team somewhat better, road easier, weather clearing up, with moon shining. About 8 o'clock caught the lights of Euston dancing through the trees, pulled reins, and all—horses, trap and occupants—were punted across the Murray, and in a few minutes we set foot on the "Free Trade" colony. Thus ends the second day's journey—100 miles more.

Turned out at six on the following morning; tremendous rain all night, consequently more mud; lively prospect for a Sunday; not even a sack to cover our knees this time; requested the driver for the use of the one we had yesterday; replied:—"O! I want it for the mails." Resumed seats, L. and driver in front, myself and a blackfellow behind. Noticing the blackfellow possessed a bag, I said:—"You bin givum half?" "Yes!" "Thank you; what name belong-um you?" "Wurrlong!" "Have you bin see Melbourne?" "O yes! bin home too, and along

France." It appears he had been to England as servant to some squatter's family. But fancy an aboriginal stating he had been "*home*." We began to get awfully cold, eagerly embraced an opportunity to warm ourselves at the first change, where we built a large fire by the roadside. In this instance, as in one or two others throughout the journey, the place of change was extremely primitive, merely a small brush-fenced triangular enclosed between three or four trees. Some neighboring selector or old "hatter" runs the horses in at appointed days. The horses run at will about the country, and sometimes "are wanted." At one stage half a team only could be mustered; the consequence was we had to proceed with one poor fagged brute of the last team. Country round about looking comparatively cheerful; bowled over high red cliffs overlooking the broad zig-zag river. They are called Mallee Cliffs, being covered with a scrub of that name—a species of small gum (*Eucalyptus dumosa*). At a neat, clean, little hotel had an enjoyable dinner. What a contrast with the former day's meal! Here we picked up another passenger, a shearer, who was summoned to appear at Wentworth, some 50 miles distant, an unwilling witness in some watch-stealing case. He was a comical "chap," and full of information. It came to my knowledge afterwards that he was a son of a real Baronet. Now I shall relate a wonderful incident which might not happen to one in ten thousand persons in a life-time. Driving through a still forest, nothing startling save the flush of a brace or two of lovely Crested Bronzewings; but, miles from any habitation, we met a blind man with swag on back, led by a beautiful brown retriever slut, a lovely creature, with exceedingly intelligent head and eyes. We pulled up to see this extraordinary couple. "Where are you going, old man?" "Swan Hill, sir. I'm going to try and raise money there to take me to the Amherst Hospital, to have an operation performed on my eyes, the sight of which I've lost by sandy blight." "Where are you from?" "Forbes, sir, nearly a thousand miles up the Darling, and my faithful dog has led me all the way. I can tell by her when I'm off the track, or when rain is approaching, by her becoming restless and hurrying me on." "Why do you keep her muzzled?" "Because of poison set for wild dogs, sir; and if I lose her I—I'm lost, sir; yes, lost!" We quite pitied the poor fellow. But think of the sagacious dog leading him all these miles. Amongst us we soon subscribed a few shillings, and sent him on his way rejoicing, and, would you believe it, when we handed the money the dog, as if returning thanks too, actually pranced round with delight, and tried to catch its tail.

By way of a change, we took two more passengers aboard. One was looked upon with rather more than ordinary interest, being a female. They appeared to be country "yokels," and were a newly-married pair. He and the driver evidently were acquainted with

each other, and indulged in some "tall" yarns and a lot of abominable horsey talk.

Now, to bring my journey, as well as my "yarn," to a close, it will be sufficient to say that, after an unpleasant quantity of more rain and hail, we skirted a plain studded with the "everlasting" salt-bush, crossed the river Darling, and arrived at Wentworth at 6 o'clock, cold and stiff, bespattered from head to foot with mud. And lastly, here ends the third day's journey—another 100 miles—or 430 miles from Melbourne.

A DAY'S FERNING ON MOUNT MACEDON.

After a very early breakfast my friend Rod and I started from home at half past five o'clock, just as the first faint streaks of dawn appeared; caught the quarter-to seven train. Steadily did the "Iron-horse" approach the mountain, which every mile grew larger and larger, and behind the Camel's Hump it wore a saddle of snow. Arrived at Macedon station at half-past eight. We arranged to pick up Taylor at his alpine-situated nursery, about four miles up the mountain. Being our maiden trip we did not know the way; a fellow passenger, a German, with characteristic politeness, kindly offered to show us along part of the track. When we had travelled a mile or so, our Continental companion exclaimed: "By mine Fatherland! you walks too quick;" therefore, after some further directions, we bade him adieu! Another mile brought us to the romantic nook locally known as "The Falls." They are about 25 feet in height. Glowing from head to foot with our sharp morning walk, we seated ourselves on a rock below the fall, with an icy cool stream gurgling past our feet, and with the warm, genial sun shining on us. Thus were we supremely happy while discussing breakfast No. 2, which was duly washed down by a little real "Mountain dew."

Two miles more of stiff up-hill work brought us to Taylor's, about 2000 feet above the level of the sea. We were most hospitably received. He soon had a great "billy" of coffee, and a number of fresh eggs boiled, which were relished with fine hot buttered scones. Breakfast No. 3. We enjoyed it all the more particularly as our appetites were keenly sharpened by the fresh morning air from off the Eucalypti foliage which Rod found it necessary to admire at every other steep pinch on the road.

Now came the exquisite pleasure of the day's enjoyment. Accompanied by Taylor (who, by the way, is a capital fern expert), with our necessary accoutrements for a fern hunt, basket, trowel, &c., we dashed through the scrub and were soon in a gully, traversing up its rough stony bottom against a limpid stream. On either hand was a perfect terrace of ferns, from the

diminutive creeping fern to the graceful tree-fern (*Dicksonia*), and now and again peeping above these the elegant umbrella-like tree-fern (*Asophila*). All this was backed up by blackwood, musk, hazel, &c., trees, entwined and festooned with beautiful creeping plants, and covered with moss of many species. While towering above all were the forest patriarchs—gigantic, noble, silvery-barked white gum trees.

In this romantic watercourse we obtained 13 or 14 different varieties of ferns, the greater number of which were acceptable additions to our ferneries, including the fine King fern (*Todea*).

Near the head of this mountain gully I was busy grubbing roots when, without notice or warning, I received a tremendous "clout" on the back of my cranium. The effect was that my head went into the mud instead of my trowel. The cause was that Rod had discovered a patch of snow, and had secretly compiled a ball. This was the first experience in my life of snow. I was quite delighted to see it, and amused Rod and Taylor with the intense curiosity I displayed by handling, smelling, and tasting it. One of the most transcendently natural sights I ever beheld was snow of dazzling whiteness, glistening in the sun upon the graceful, drooping, bright warm green fern-tree fronds.

After tearing through a belt of scrub we reached the highest peak of the range, the Camel's Hump, or Mount Diogenes. Its altitude is approximately about 3000 feet above sea level, some 30 or 40 feet higher than the adjacent peak, Macedon proper. The view from the summit was indescribably grand in the extreme. What a picturesque panorama! To the northward stood Mount Alexander, with plain succeeding plain, and Castlemaine in the distance. To the east the rotund form of old Mount Juliet, with a shower rushing upon her brow. To the west mount after mount appeared, ending in an abrupt spur of the Pyrenees. But the homeward view!—how lovely the great intervening plain below, chequered by the shadow of swiftly passing clouds. Melbourne, encircled with a wreath of smoke, behind which, from our position, appeared to rise the dim forms of the Dandenong Ranges. The sea was like an immense sheet of glass, out of which Arthur's Seat rose in a faint cloud-like shape in opposition to the serrated contour of the You Yangs. "As I view these scenes so charming" flashed across our minds, and we would like to have viewed and meditated for hours, but time did not permit; therefore, after some whisky and snow (we could not obtain water so high up) and more snowballing, we commenced a downward march.

By the way, I must not forget to furnish a frightful pun perpetrated by Rod. We were climbing up hill, puffing and blowing, when I said to Rod, "Go you first, and let me catch hold of your coat-tail." He replied, "You had better ask *Taylor*" (tailor).

At all times we were liable to get terrible "busters," caused by the slippery state of the ground and logs. But of all the falls Rod's was a capper. What a laugh Taylor and I had at his expense. In the act of traversing some thick scrub, Rod bringing up the rear, suddenly we heard a tremendous bang and a crash, as if, from behind, some great gum tree had fallen. I instinctively buried my head between my shoulders, expecting the branches were about to overwhelm me, but on looking behind we saw Rod on his back, kicking his heels in the air, while between him and mother earth was his basket of ferns, as flat as a pan-cake.

On returning to the hut we had a hurried mouthful, and the three of us caught the six o'clock train, and half-past eight saw us safe at home. So ended a most pleasant and profitable day's "out."

A MONTH AMONGST THE TASMANIAN BIRDS.

(Read before the "Field Naturalists' Club," Nov. 12th, 1883.)

We cleared Port Phillip Heads late on the afternoon of the 5th October, 1883, in the good steamship "Mangana," bound for Launceston. We were soon sensible of having entered the "Rip." "Evil communications corrupt good manners." The vessel went heaving in all directions, consequently nearly all the passengers followed suit, myself not excepted. However, in my extremity, my ruling passion was stronger, and I made my first acquaintance with the birds. Several Giant Petrels were soaring in all directions over our wake. No doubt, seeing a breeze springing up, and a deck full of living freight, they anticipated a good evening's repast. Next morning we renewed their friendship. In the offing were flocks of Short-tailed Petrels, or Mutton-birds, as they are more commonly called. Storm Petrels were skimming the waves with their singular jerky action, while from aloft some solitary old Gannet, after some of the finny tribe, would dive headlong into the billows, sending up a wreath of spray higher than the surrounding crests of the waves.

Approaching the Tasmanian coast, we fell in with Bass's Straits Tern and the two Gulls, the Pacific and the Silver. These two last-named inoffensive sea-birds are included in the Tasmanian "Game Protection Act," which imposes a penalty not exceeding twenty shillings for shooting at or killing them. The week after I landed, a party of young men from Launceston were out yachting on the river. One fired at and killed a Silver Gull that was flying past, but his act was observed by one of "Bobby's" keen-eyed "Peelers," who very properly summoned the offender before the police court. The culprit was fined five shillings, with eight shillings and sixpence costs. He and his comrades claimed the dead bird, which the bench granted. They formed a mournful looking procession, returned to the yacht, and tried to

make a joke of the whole affair by displaying from the mast a card with the following inscription—"Gulls, 13s. 6d."

After entering Low Heads, and during the course up the Tamar, as may be expected, we saw many of the ill-shaped Cormorants, the Australian, the White-breasted, and the Little.

My head-quarters were near Evandale, at Ridgeside, a large sheep and agricultural farm, owned by Mr. F. H. Reed. Ridgeside is about fifteen miles, in a south-easterly direction, from Launceston, and of a pronounced hill and dale character, subdivided into numerous paddocks by live fences of hawthorn, gorse, and briar, which offer natural resorts for various descriptions of birds. Close by are thickly-timbered paddocks, backed up by spurs of the Great Western Tier, of granite and sandstone formation, and clothed with trees of many sorts, principally gums (notably peppermint), banksias, acacias, casuarinas, &c. The hill sides are indented by several ravines and gullies containing thick scrub and undergrowth—hazel, musk, swordgrass, ferns, &c. Therefore, within a reasonable radius of Ridgeside, there is almost every description of country conducive to bird life of every form.

The ocean brought me in contact first with the sea-birds, the last of the Orders; but now I shall revert to the first Order, and take in sequence, in the form of a census, those species that came under my notice, making remarks thereon as I proceed.

The king of Tasmanian birds, as well as Australian, is the Wedge-tailed Eagle. I watched him circling on high; his eye was probably on some unfortunate "bunny" hiding under a tussock of grass. Also saw two or three of his hawking colleagues, the Sparrow-hawk, White-fronted Falcon, the Harrier or Swamp-hawk, and the Brown Hawk. Of the last I discovered two nests, but they were situated in the very highest trees of the forest, therefore, like bad riddles, "I gave them up." A nocturnal bird—Cuvier's Podargus—from out the adjacent forest, during the still nights, at intervals mournfully uttered "Mo-poke."

The homely little Welcome Swallow nested in the barns. Two others I noticed more afield, the Tree Swallow and the Wood Swallow. The neat little Allied Diamond-bird was displaying great activity about the bowls of hollow trees—breeding season was evidently on—but the Spotted Diamond-bird had not commenced to burrow. Now for the Crow-shrikes. Found the nest of the Sooty, which flew off uttering her peculiar shrill cry; also took two nests with three eggs each of the Cinerous Crow-shrike, or Butcher-bird. It is closely allied to ours; its notes appeared deeper and rounder. It is a terror to cage-birds. The Tasmanian Crow-shrike, or common Magpie, is almost a domestic bird, it is so useful, tuneful, and tame; its song is not so powerful as its two representatives on our continent. I remember, at eleven o'clock on a moonlight night, hearing one whistle. They are certainly very tame; one pair was hatching in a tree over-

hanging the buildings at Ridgeside. In the same tree was a large bell that rang the men up to meals; the louder it rang the louder the birds whistled. Also, in a blue gum-tree in the main road of the township, was another nest. I was greatly amused one day at a Magpie, perched on a three-railed fence, piping its merry song at a railway train which whizzed past within a few feet of it. It is a curious fact that underneath, conjoining their nests, I often took those of the Yellow-tailed Acanthiza, or Tomtit; on one occasion the eggs of both birds were fresh. Of the Tasmanian Grancalus, I have nothing to add, except it will take a very critical eye to distinguish the difference between it and our Black-faced species. Of the Grey-tailed Thickhead, with its lovely rich yellow breast, and less gaily-plumed mate, I was lucky enough to take three nests with fresh eggs; the clutches were three, two, and two. Selby's Shrike-thrush was seen and heard in every locality. It is commonly called "Bob Whitehead" by the Islanders. That expression is distinctly uttered in its lively native notes. Excepting the Tomtit, the five last-mentioned birds are all peculiar to Tasmania.

Some ornithologists do not give Tasmania credit for possessing the Shining Flycatcher (*Myagra nitida*). I made particular inspection of a male bird I saw in the ranges. There can be no mistake about it; I saw a pair of skins as well as seeing it in the flesh. I also possess eggs that were taken on the Island. The other Flycatcher is the White-shafted. I took its wonderfully-constructed wine-glass-shaped nest, containing two eggs, in one of the deep gullies of Mount Wellington while searching for nests of the Pink-breasted Wood Robin, of which, however, I only succeeded in finding a couple of last season's nests. The Scarlet-breasted, the Flame-breasted, and the Dusky are the other remaining Robins; the last-named is the only one whose habit at is restricted to Tasmania and the intermediate Islands. I was recompensed in taking two sets of three each of their beautiful olive-green eggs. The Sombre-colored Sericornis was noisy in all gullies. In every hedge and garden may be seen the lovely Blue-headed Wren or Long-tailed Superb Warbler. Its feeble but sweet twittering song always gladdens one's mind. There is an abundance of little Tasmanian Acanthizas; their nests are generally the receptacle for the egg of the Fan-tailed Cuckoo. During my visit, Mr. Reed's overseer had fortune in taking in a gorse hedge near home a nest containing this Cuckoo's egg. The other, the Great Acanthiza, or, properly speaking, the Greatest of the Acanthizas, is a *rara avis*, being almost unknown. The only skin in existence is in the Philadelphia Museum, and that is the one from which Gould took his plate and description nearly thirty years ago. And it is no *small feather* (no pun meant on *Great Acanthiza*) in the cap of the "Field Naturalist's Club of Victoria," that one of its members has revealed to ornithological science a second skin.

My securing it came about in this wise. In Hobart I met a young energetic egg collector, Mr. Arthur L. Butler. On cross-questioning closely about this *Acanthiza* he said he had observed a bird like it in the Mount; so by appointment we went in search one afternoon, taking a breech-loader and a few charges of dust shot with us. We were about to return without our object being accomplished, when a small bird darted through the undergrowth. Quick as thought, the gun was discharged, and Mr. Butler presented me with a bird which was none other than *Acanthiza magna*.

The Striated Calamanthus, with its pretty warble, which seems to keep time to the wagging of its erect tail, is not without interest. This bird is represented as being peculiar to Tasmania, but I have undoubtedly seen it at Mordialloc. The Islanders call it by the somewhat uneuphonious name of "Stink-bird" or "Stinker," because it emits a gamey scent, and dogs sometimes point at it. The Pipit or Ground-lark is identical with the Australian. The only solitary Finch is the Fire-tailed. Spotted Ground Thrushes betray themselves on stony rises by their whistling-like cry.

I was rather surprised in taking a clutch of Mountain Thrushes eggs to find one only about half the normal size; the nest was apparently deserted. It was suggested that the owner had decamped in a fright at producing such a small egg.

It appeared to me that some of those species of birds common both to Australia and Tasmania were larger in the latter country than in the former, notably the Thrushes and some of the Honey-eaters. The eggs also give greater dimensions. The only hypothesis I can advance for the difference is climatic influence. It is a very remarkable coincidence, but I noticed the same with regard to other "birds," (I trust the ladies will forgive me) that the average size of Tasmanian born ladies exceeded that of Victorian. I merely mention this *en passant*, as the Frenchmen say. Crows are continually "caw-cawing." They cannot decide whether they have two species or not on the Island—the Hazel and the White-eyed. One gentleman positively affirmed that he "spotted" a "White-eyed Crow" flying overhead, and fired at and shot it, but when it reached mother earth behold its eyes were *hazel*.

With one exception, I identified all the Honey-eaters that inhabit Tasmania, viz.:—New Holland, Tasmania, Yellow-throated, Wattled, Brush Wattle, Spinebill, Garrulous, Strong-billed, and Black-headed, three of which are peculiar to the Island, the two last named, and the Wattled, which utters a coarse note sometimes, like a Blue Mountain Parrot with a severe cold. I was very much delighted at the lively prying action of the Strong-billed and Black-headed Honey-eaters while searching for food; the latter also possesses quite a cheerful little song. I endeavoured

persistently to discover their nests, but only found fully-fledged young; therefore, these two species evidently had commenced to breed at the end of August or beginning of September.

Zosterops were coming down to breed in the hedges. In addition to the Cuckoo already alluded to, I saw the Pallid and the two Bronze Cuckoos, four species altogether, forming the compliment of the Island. They all migrate from Australia.

On a mountain side I heard the wail of the Yellow-eared Black Cockatoo. Shot a pair of Tasmania's peculiar Parakeet—the Yellow-bellied. Rosellas were plentiful, Grass Parakeets a few, also Musky Lorikeets. The Swift Lorikeets were darting in small flocks over Hobart, and sucking saccharine matter from the Blue Gum blossoms overhanging the streets. Flushed many Bronzewing Pigeons which were feeding on a gorse hedge and acacia seeds, also took a nest with a pair of eggs. Saw two species of Quail. Could make half a dozen brace of Stubble break cover any morning in a cultivation paddock adjoining the homestead; also flushed a covey of Tasmanian Swamp Quail, being attracted to the spot by their curious crying call.

One day, in company with Mr. Reid (who, by the way, is a Tasmanian oologist of no mean standing), went to a swamp. Off boots, tucked up unmentionables, and waded in. Other "waders" were present besides ourselves, to wit, White-fronted Herons or Cranes, and Bitterns; while further in, Porphyrios or Coots were screeching from out the rushes. Took a Musk Duck's nest with two eggs. Put up Black Ducks but obtained no eggs. We tried hard to take a little Grass Bird's nest; a pair kept flitting in the rushes about us uttering melancholy sustained "pee-pee-pee" notes.

In crossing the Island I noted Black Swans near the Lake of Tiberias. In going to enjoy a bathe in the South Esk river, one warm afternoon, a pair of Mortier's Tribonyx kept dodging around the bank, making a loud rasping "crake-crake" noise, at the same time producing a curious bobbing action of the tail. These birds are about the size of a small domestic fowl, and can run with amazing rapidity along the ground.

Thus in four weeks I identified about 75 species of Tasmanian birds, being nearly half the number, including sea-birds, that belong to the island.

Now I think I have come to the end of my tether, if I include the Reed or Sege Warblers I heard on the Tanar. Some authorities say their habitat does not extend to Tasmania. This is an error.

In my outings of imported game I noticed rabbits, hares, and deer; of indigeneous animals, kangaroo, wallaby, opossums, kangaroo-rats, and porcupine ant-eaters. Many a good startle I experienced by some of the beasts, especially when gaping up a tree, with mouth as well as eyes open, at some attractive bird,

when suddenly out would dash a wallaby or kangaroo-rat from the scrub at my very feet. It would be difficult to say whether the marsupials or I sustained the greater fright.

"Ye spotted snakes, with double tongue." Of these reptiles saw two species, the tiger and the white-lipped. Both were captured alive. The tiger was about $2\frac{1}{2}$ feet long, and, with Mr. Reed's aid and directions, we experimented on a sheep dog. The dog was bitten on the left ear about nine o'clock one morning. Symptoms of virus poisoning and vomiting set in in about an hour and a half. Heart irregular and pupils becoming dilated. Injected five minims of antidote. Repeated it at 2 p.m. Dog seemed better, and eat and drank. Next day, although weak, the dog was lively ; when let off the chain, ran about and hunted with the other dogs. On the following day bad symptoms set in again ; injected antidote several times ; notwithstanding, the dog died on the fourth day.

It is believed that, if the remedy had been applied simultaneously or immediately after the bite, the dog would have been saved. Besides, in dogs bitten by tiger snakes, deaths occur in an average about two hours afterwards. The inventor of the antidote is William Lucroft, who has been bitten some sixteen times, and his remedy has not failed him. On one occasion Mr. Reed saw him a few minutes after he (Lucroft) had been bitten.



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